The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

o. 1098—Vol. XXVI.] LONDON, SATURDAY, SEPTEMBER 6, 1856. {Stamped .....Sixpence. Unstamped...Fivepence.

JAMES CROFTS, MINING AND SHAREBROKER, o. 1, FINCH LANE, CORNHILL, LONDON, TRANSACTS BUSINESS, UYING and SELLING, for immediate cash.
ND MINES, well selected, are the best of any known investments—pay- 5 to 30 per cent. per annum in dividends. The choice of NON-DIVIDEND r speculation requires careful discrimination.
orts is a BUYER or SELLER of the following:—Alfred Consols, Bedford Wheal Wrey, Sortridge Consols, North Basset, West Basset, Trewetha, Wh. Rosewarne, Wheal Edward, West Providence, Wheal Kitty (St. Agnes), n, Lelant Consols, Wheal Kitty (Lelant), Vale of Towy, East Russell, Bryn- Collacombe, St. Austell Consols, Herward United, Providence, Boscean, Gawton United, Eaglebrook, Ding Dong, Wheal Mary Ann, Great Hewas, iller, Wheal Basset, United Mines (Gwennap), East Tamar, Cubert United, ewer, Bryntail.
orts is a BUYER of South and East Tamar.
rket for good, and especially DIVIDEND, shares is advancing. 1

JAMES LANE, No. 29, THREADNEEDLE STREET,
s a BUYER of South Frances, Buller, Basset, Providence, Ding Dong, Great East Tamar, Mary Ann, Trelawny, and several of the progressive mines.
s a SELLER of Drake Walls, South Cuddra, West Sortridge, Molland, South South Devon Consols, at prices which will prove remunerative to present 2

JAMES B. BRENCHLEY, No. 2, PINNER'S COURT, LD BROAD STREET, LONDON, is a BUYER of the following, for cash y of transfer, and purser's certificate of registration:—

Consols.	10 Mary Ann.	50 Great Baddern.
l Basset.	100 Pedn-an-drea.	100 Gawton United.
l Buller.	50 Great Alfred.	10 Porkellis United.
Frances.	10 North Frances.	100 Tamar Consols.
Basset.	5 Ding Dong.	10 Par Consols.
Basset.	25 Hender.	50 Rosew. and Herland.
etha.	10 Wheal Wrey.	10 Clijah and Wentworth.

requiring any of the above, can be supplied at market prices. Business d in Railway, Insurance, and other securities. 3

IDEND MINES, well selected, are the BEST of all PUBLIC VESTMENTS, paying, as they do (in dividends every two or three months), o 30 per cent. per annum. NON-DIVIDEND MINES, carefully chosen, y advance in price 500 per cent., or more.
WATSON, MINING BROKER, STOCK and SHARE DEALER, having experience in every department of mining and its management, together xtensive and regular correspondence with mining agents and others in Devon, and elsewhere, is enabled to judge of and select mines of intrinsic TER WATSON, being a Member of the Mining Exchange, will forward a es when required, and may be consulted daily as to purchases, sales, &c. eadneedle-street, London, Sept. 6, 1856. 4

F. LISABÉ, C.E., CONSULTING MINING ENGINEER, OFFICE, 2, DAME STREET, DUBLIN.
ABÉ, may be CONSULTED personally, or by letter. His long experience d will be found useful to capitalists desirous of investing money in mining r speculations in that country. 5

SSRS. WILLMOTT AND CO., of 68, OLD BROAD STREET, STOCK and SHARE DEALERS, are always BUYERS and SELLERS of D-PAYING and other PROMISING MINES. SALES and PURCHASES ED in BRITISH and FOREIGN FUNDS, BANKS, the various STEAM ATION COMPANIES, and every description of security. A Stock Exchange arded to all parties doing business with this firm. 6

WILLIAM MICHELL CONTINUES to DEAL in ALL DIVIDEND and good PROGRESSIVE MINES, at exceedingly close prices. in exchange for transfers to all well-known parties; and parties of re- can have shares registered previous to payment.
Money advanced on Mining Shares.
tiafriars, Old Broad-street, London, Sept. 5, 1856. 7

GEORGE BUDGE, of 4, BIRCHIN LANE, CORNHILL, LONDON, has SHARES FOR SALE at the following prices:—

llack, £185.	5 Gt. South Tolgus, £10.	50 South Tamar, £1.
ord United, £6¾.	10 Hingston Down, £3.	5 Swanpool, £3¼.
don Consols, £8.	3 Halamanning, £11½.	100 United Mines (Tavist.)
rt, 2s. 6d.	50 Lady Bertha, 13s. 6d.	100 West Sortridge, 1s. 6d.
Ding, £40½.	100 Molland, 1s.	1 Wheal Buller, £300.
e Walls, £2.	10 North Frances, £10½.	1 Wheal Basset.
Frongoch, 2s. 3d.	50 Nant. & Penrhiw, 30s.	10 Wheal Emma.
h. Robert, 10s. 6d.	5 North Basset, £37½.	10 Wheal Wrey, £8¼.
es, 21s. 6d.	30 Pedn-an drea, 22s.	3 Wheal Margery, £33.
Wh. Badd., 16s. 9d.	2 Providence.	30 Wheal Grenville, £1¾.
	3 Par Consols, £21½.	
ox is a BUYER of—		20 Wheal Grenville, £1¼.
es.	1 South Frances, £358½.	200 Nant. and Penrh., £1¾.
ton Down, £2½.	1 Wheal Basset, £372.	50 Wheal Zion, 7s.

Orders for buying and selling shares punctually attended to. 8

IDEND MINE SHARES FOR SALE, some of which are ying 30 per cent. on present price:—

ock, £175.	5 Par Consols, £21.	1 Trewetha.
ford Hall, £110.	5 Providence Mines.	1 Wheal Buller.
Dong.	1 South Caradon.	

CLASS PROGRESSIVE MINES, that will soon pay dividends, and selling per cent. below their value:—

Crinnis.	20 South Cuddra.	100 Great Hewas.
Caradon, £130.	10 Wheal Margery.	10 West Fowey Consols.

IVIDEND MINES, very cheap:—

on Consols.	1 East Basset.	10 Swanpool.
Bas. Uni., £1¾.	100 Great Crinnis.	4 West Frances.
rd Consols.	10 Lady Bertha.	50 West Polberro.
nd Lanarth, £5.	5 North Buller.	50 West Par.
ews, 7s.	50 Oola.	10 Wheal Emma.
ine and Jane, 11s.	10 Queen of Dart.	20 Wheal Ludcott.
Buller.	50 South Condurrow.	15 Wheal Guskus.
berras.	5 Stray Park.	

ED TO BUY.—Great Hewas, St. Austell Consols, South Cuddra, Wheal Swanpool, North Buller, Marke Valley, Wheal Ludcott, Trewetha, Por- ed, South Frances, Wheal Buller, Mary Ann, and Herward United.
LEAN has instructions to effect EXCHANGES in several MINES.
Mr. LELEAN, Mine Share Dealer.
nion-court, Old Broad-street, London, Sept. 6, 1856. 9

H. G. SHARP begs to call the attention of his friends and e public to the present depressed state of the mining share market, consi- most favourable opportunity for capitalists to invest in many of the divi- progressive mines, the former paying from 15 to 30 per cent. in dividends, ery two and three months, and the latter often advancing in price from per cent. and more. Mr. SHARP will be happy to forward a list of those ch, in his opinion, are worth purchasing at the present low prices, and very information required.
LE, at nett cash prices, or any part:—

Bas. Uni., 38s.	50 Okel Tor.	20 Tincroft, £4½.
ck. £190.	5 Par Consols, £20¼.	40 Tamar Consols, £1¾.
d United, £7½.	30 Pedn-an-drea, 23s.	150 Vale of Towy, 21s.
Daren, 1s.	50 Pencorse Cons., £2.	100 West Sortridge, 2s. 6d.
Wh. Buller, 19s.	20 Queen of Dart, 37s.	1 Wheal Buller, £315.
f Cornw., £19.	1 Rosewarne Unit., £70.	1 Wheal Basset, £305.
nis Lake, £2¼.	10 Swanpool, £3¼.	50 Wh. Grenville, 30s. 6d.
sely Fell, 10s.	100 Sortr. and Bedf., £¼.	20 Wheal Arthur, £5.
Caradon, 4s.	20 South Tamar, £2¾.	100 Wheal Langford, 6s.
. Down, £2 19s.	50 Severn, £1¼.	50 West Polberro, £2½.
ncer, 7s.	50 S. Bull. & W. Pens., 18s.	20 Wheal Edward, £2¼.
Bertha, 11s. 6d.	10 Trehane, 17s. 6d.	20 Wheal Tehidy, £2¾.

en wishing to sell shares will please forward their instructions, stating rice required, and time allowed for the disposal of them; and those wish- hase must send positive orders.
AR is a BUYER of the following, or any part:—

. Down, £2½.	30 East Garras, 12s.	300 West Sortridge, 1s. 6d.
Basset, £385.	20 E. Gunnis Lake, £1¼.	100 West Collacombe, 4s.
Buller, £275.	10 Great Alfred, £4¼.	20 South Tamar, £2.
Bheba, £1¼.	1 Copper Hill, £125.	100 Carnewas, 2s. 6d.

, Church-court, Clement's-lane, Lombard-street, London. 10

A. H. GARLAND has the following SHARES FOR SALE:—

Severn, 20s.	5 Swanpool, £3¼.	20 Queen of Dart, 36s.
Alfred, 20¼.	20 Wheal Grenville, 30s.	20 Hingst. Down, £2 10s.
Frances, £19¼.	100 Sort. and Bedf., 3s. 3d.	2 Duke of Cornwall, £20.
ons., £2 13s. 6d.	5 Par Consols, £20¼.	50 Devon Wh. Buller, 18s.
ks, £3 6s.	1 Rosew. United, £69¼.	100 West Sortridge, 2s. 6d.
Tamar, £2¼.	100 West Grenville, 3s.	5 Bedford United, £7.
Well, £7 18s.	10 Wheal Edward, £2¼.	20 E. Gunnis Lake, £2¼.
, £4 3s. 9d.	50 Vale of Towy, 21s.	50 Wh. Langford, 3s. 3d.
e, 17s. 6d.	20 Bul. and Bas. Uni., 30s.	20 Wheal Zion, 12s. 6d.
h. Vor, £3 2s.	50 Lady Bertha, 11s. 6d.	10 Great Alfred, £5¼.

ARD deals in all the dividend and progressive mines, and will be happy y instructions, which will be promptly attended to; and requests that shing to purchase or sell shares will send positive orders.
Church-court, Clement's-lane, Lombard-street, London, 11

GEORGE MOORE, DEALER IN MINING SHARES, 1, CROWN COURT, THREADNEEDLE STREET.
Cash given on receipt of transfer. 12

MR. JOSEPH JAMES REYNOLDS, STOCK AND SHARE-BROKER, No. 21, THREADNEEDLE STREET, LONDON, begs to return his sincere thanks to his friends and the public for the liberal support received from all parts of the kingdom during the period he has been a BROKER of the CITY OF LONDON.
Mr. REYNOLDS continues to TRANSACT BUSINESS in BRITISH and FOREIGN STOCKS, FUNDS, and SECURITIES, BRITISH and FOREIGN RAILWAY SHARES, DEBENTURES, &c. Also, in ENGLISH, IRISH, SCOTCH, and FOREIGN MINING SHARES.
The very nature of mining property is such that it can only be reached by the adventurous; and, if not aimed at with due caution, directed by sound judgment, acquired by experience, is very hazardous; but capital employed in the development of mineral wealth, with these requisite essentials to success, has generally been found pre-eminently profitable, the average return being found much greater than that upon any other kind of investment.
Legitimate mining has suffered much from the multiplication of ill-digested schemes, but good sound mines are undoubtedly among the most profitable investments of British capital.
There are now several good dividend-paying mines, with large reserves of ore, selling so as to pay a very large rate of interest; and others approaching a dividend-paying state, with prospects of improvement, that in all probability will realise large profits upon current prices, within a very moderate period.
Having great experience in mining, an extensive acquaintance with the best mines, and being in constant communication with the most skilful agents, Mr. REYNOLDS is always in a position to give reliable information, and will have pleasure in giving such advice only to investors as he feels confident will result in mutual advantage. 13

MESSRS. POWELL AND COOKE, DEALERS IN MINING SHARES, No. 8, HERCULES CHAMBERS, OLD BROAD STREET, LONDON.—The above continue to DEAL in the SHARES of all the leading DIVIDEND and good PROGRESSIVE MINES.
Porkellis United and Great Wheal Alfred Mines are good investments at present quotations.—Aug. 15, 1856. 14

MR. E. GOMPERS, No. 98, GRACECHURCH STREET, has BUSINESS TO TRANSACT in most of the leading DIVIDEND and PROGRESSIVE MINES. Also, in Life, Fire, Maritime Insurance, Steam Navigation, various Gas Companies, and various Joint-Stock Companies' Shares, returning regular dividends. 15

JAMES HERRON has FOR SALE the following SHARES, at the prices quoted, and FREE OF COMMISSION:—

10 Alfred Consols.	1 Mary Ann.	5 South Carn Brea.
10 Boiling Well, £7¾.	5 Mill Pool, £3¼.	15 Treleigh (New), 7s. 9d.
10 Bryntail, £3 17s. 6d.	5 North Robert.	1 Trelawny, £21¼.
50 Ballyvirgin, £3 11s. 6d.	5 Nor. Trelawny, 12s. 9d.	5 Trewetha, £3¾.
10 Welch Consols, £3¼.	5 North Frances.	5 Trehane, 13s. 9d.
2 Cefn Brwyno, £65.	100 North Towy, 3s. 6d.	10 Tincroft, £4 7s. 6d.
25 Drake Walls, £9.	30 Pem. and East Crinnis.	5 Trefusis.
1 Ding Dong.	5 Porkellis United.	100 Tamar Consols, 23s. 9d.
1 East Daren, £87½.	2 Provid. Mines, £60¾.	50 Tavy Consols, 6s. 9d.
1 East Wh. Rose, £16¾.	20 Pedn-an-drea, 22s. 6d.	20 Vale of Towy, 20s. 6d.
30 East Frongoch, 1s. 11d.	10 Pendeen, 12s. 9d.	15 Wheal Zion, 11s. 9d.
1 Grambler, £76¾.	20 Rosew. and Herland.	5 Wheal Edward, 39s.
20 Great Vor, £2¼.	1 Rosewarne, £69½.	10 Wheal Wrey, £8¼.
10 Gilmar, £2¼.	6 South Crofty, £5⅞.	5 Wheal Uny, £4¼.
5 Great Alfred, £5⅞.	10 So. Condurrow, 9s. 9d.	2 W. Providence, £19¼.
5 Holmbush, £1¾.	20 St. Day Unit., 21s. 9d.	2 Wh. Grenville, £1⅛.
5 Kelly Bray, £1 18s. 9d.	1 South Tolgus, £140.	30 West Sortridge.
10 Ludcott, 33s. 6d.	5 St. Aub. & Gryllis, £3¾.	10 West Alfred Consols.
30 Lady Bertha, 12s. 9d.	10 Stray Park, £6¾.	

Mr. HERRON declines inserting shares for sale in his list unless the seller names a fair market price, where such can be ascertained, so as to prevent parties being disappointed who read his list with the object of purchasing; and the seller must agree to deposit them with him on the day his advertisement appears, to prevent complaints that shares cannot be obtained, and at the prices quoted. 16
2, Adam's-court, Old Broad-street, London.

GEORGE SPRATLEY, 15, OLD BROAD STREET, has for POSITIVE SALE, at much LOWER PRICES than hitherto offered, the following shares:—

5 Wheal Margery.	20 Carnyorth.	2 Botallack.
5 East Wheal Rose.	5 Ding Dong.	10 South Ellen.
10 Alfred Consols.	1 Wheal Buller.	3 West Providence.
10 Wheal Wrey.	5 Providence.	100 South Devon.
5 Porkellis United.	20 Rosewarne & Herland.	100 Pedn-an-drea.
1 West Caradon.	50 Great Hewas.	50 West Polberro.
15 Trevetha.	10 Wheal Grenville.	10 North Buller.
10 Bedford United.	15 Swanpool.	2 West Frances.
50 South Cuddra.	1 Rosewarne.	2 Brynford Hall.

17

MR. F. W. STOCKWELL, 75, OLD BROAD STREET, CITY, will give the best information and advice to persons PURCHASING BRITISH and FOREIGN MINING and RAILWAY SHARES, STOCKS, &c. Having facilities for acquiring a minute and, at the same time, comprehensive knowledge of British mines of all classes, he feels confident of directing purchases and sales with advantage. Promptitude and immediate cash settlements may be relied on. References given if required. 18

MR. ADAM MURRAY, CONSULTING MINING ENGINEER, 10, HERCULES CHAMBERS, OLD BROAD STREET, CITY. 19

MR. A. H. PATTERSON, C.E., LAUNCESTON, will UNDERTAKE SURVEYS, PLANS, &c., of MINES and MINERAL PROPERTY. 20

MR. B. LAMBERT, STOCK, SHARE, AND MINING AGENT, 3, HATTON COURT, THREADNEEDLE STREET. 21

MR. WM. SIMS, MINING SHAREBROKER AND GENERAL COMMISSION AGENT, REDRUTH, CORNWALL. 22

MR. ALFRED VOSPER, ASSAYER, TAVISTOCK. 23

MR. W. H. BRUMBY, STOCK AND SHAREBROKER, 1, QUIET STREET, BATH.
BUSINESS TRANSACTED in every class of MINING PROPERTY. 24
WANTED.—West Polberro, Bryntail, Alfred Consols, Boscean, Wheal Zion, and Grambler and St. Aubyn.

CAPT. THOMAS DUNN, of TAVISTOCK, undertakes to INSPECT, REPORT, and SURVEY any MINES or MINERAL PROPERTY in ENGLAND, IRELAND, SCOTLAND, or WALES. No objection to take the management of any mine or mines in the neighbourhood of Tavistock. 25

CAPTAIN RICHARD HENRY VERRAN (late of Cornwall) undertakes to INSPECT, REPORT, and SURVEY any MINES or MINERAL PROPERTY in ENGLAND, IRELAND, SCOTLAND, or WALES. The highest references can be given as to character and ability on application.—Address, Brook House, Llanidloes, North Wales. 26

NORTH AND SOUTH WALES.—CAPT. JAMES ROACH (Manager of the Bryntail Mines, near Llanidloes, Montgomeryshire) OFFERS HIMSELF to INSPECT and REPORT upon MINES and MINERAL PROPERTY in any part of North and South Wales. Twenty years successive application in mines of all descriptions, enable him to impart sound judgment to those who may avail themselves of his services.—Sept. 5, 1856. 27

NICKEL AND COBALT REFINING, AND GERMAN SILVER WORKS, MILL STREET, BROAD STREET, BIRMINGHAM.—STEPHEN BARKER begs to inform the Trade that he has the following articles for sale:—

REFINED METALLIC NICKEL.	OXIDE OF COBALT. [WIRE, &c.
REFINED METALLIC BISMUTH.	GERMAN SILVER—IN INGOTS, SHEET,
NICKEL AND COBALT ORES PURCHASED.	28

MR. R. TREDINNICK, BROKER, AND DEALER IN MINING BANK, CANAL, and INSURANCE SHARES, has FOR SALE—

20 Shares in the Union Bank of London.	2 Providence Mine, paying £5 quarter.
2 Buller Shares, paying £20 bi-monthly.	10 Wheal Charlotte.
1 Basset, paying £10 to £12 bi-monthly.	50 South Buller and West Penstruthal.
2 Sou. Frances, paying £10 bi-monthly.	1 Old Tolgus United.
50 Buller and Basset United.	10 Gilmar.
10 South Carn Brea.	50 Carnewas.
10 North Basset.	50 Grenville.
100 South Condurrow.	

Offices, 4, Austinfriars, London. 29

DEPOSIT, LOAN, LIFE, AND FIRE OFFICE AGENCY.—MONEY ADVANCED upon HOUSE, LAND, RAILWAY, MINING, and OTHER PROPERTY, to any amount, at a low rate of interest. APPROVED BILLS DISCOUNTED, and all monetary transactions effected, on application to Mr. E. C. MANUEL, 47, Old Broad-street, London.
Mr. MANUEL will shortly open an office also in Cornwall for the same business. 30

MR. T. P. THOMAS begs to return his most sincere thanks for the kindness and support which he has received from his friends and the public in general in his business as mining auctioneer; and to inform them that he CONTINUES his PERIODICAL SALES BY AUCTION, trusting that his experience as a mining agent, and the confidence and support he has received from the leading shareholders in Cornwall, London, and elsewhere, for the last 13 years, will be a guarantee that all property placed in his hands for sale will be disposed of to the best advantage.
Dividend and established shares bought and sold privately at the closest prices. Mines inspected and reported on by the most experienced agents.
2, Crown-court, Threadneedle-street, London. 31

MR. WM. MOORE, 1, CROWN COURT, THREADNEEDLE STREET, has FOR SALE the following SHARES, or any part, FREE OF COMMISSION:—

3 Alfred Consols.	1 Providence.	50 Vale of Towy.
5 Bedford United.	1 Rosewarne.	2 Wheal Kitty.
10 Hingston Down.	10 South Tamar.	2 Wheal Margaret.
2 Mary Ann.	1 South Caradon.	10 Wheal Wrey.
5 North Basset.	1 South Frances.	1 Wheal Buller.
5 North Roskear.	20 Sortridge.	1 Wheal Basset.
5 Par Consols.	1 Trelawny.	5 West Basset.
	50 Trewetha.	

The above are all dividend-paying mines, and many of them selling at prices worthy the immediate attention of capitalists.

10 Arthur.	2 East Rose.	10 South Devon.
5 Boiling Well.	15 Great Alfred.	20 South Cuddra.
20 Crebor.	2 Gram. and St. Aubyn.	1 South Garras.
1 Collacombe.	20 Ludcott.	100 Sortridge and Bedford.
5 Duke of Cornwall.	5 Porkellis United.	5 Wheal Edward.
10 Devon Buller.	10 South Ellen.	20 Wheal Grenville.

N.B. Any purchaser of undoubted respectability can have shares REGISTERED, and receive CERTIFICATES of same, previous to payment.
Business transacted in every description of British and Foreign Mining Shares.
Cash given on receipt of transfer.—1, Crown-court, Threadneedle-street. 32

SHARES WANTED, FOR IMMEDIATE CASH:—

2 South Frances.	10 Par Consols.
5 Mary Ann.	20 Alfred Consols.
1 Rosewarne.	50 Great Alfred.
100 East Garras.	10 North Basset.
50 Grenville.	1 Devon Consols.

Apply, stating lowest price, to Mr. F. E. BLYTH, 1, St. Michael's-alley, Cornhill. 33

MINING OFFICES.—Mr. T. CARTHEW, ST. CLARE STREET, PENZANCE.
Offices of the West Wheal Virgin Tin Mining Company. 34

MR. A. FRANCIS, MINING AND GENERAL COMMISSION AGENT, MAY BE CONSULTED at present at No. 164, FLEET STREET (Anderton's Hotel), from Two until Four P.M.
British and Foreign Mines inspected and reported on. 35

MR. EVAN HOPKINS MAY BE CONSULTED DAILY on all matters connected with FOREIGN and ENGLISH MINES, REDUCTION WORKS, MACHINERY, NEW PATENTS, &c. Every precaution taken to guard his clients from profitless and deceptive schemes.
Foreign Correspondence must reach Mr. Hopkins free of expense.
38, Thurloe-square, Brompton. 36

MR. J. H. CLEMENT, CONSULTING MINING ENGINEER AND METALLURGIST.
OFFICE (First Floor), 4, UNION COURT, OLD BROAD STREET, LONDON.
Patent processes examined, and the practicability of such being useful for operating on large amounts of ores declared. 37

JNO. W. PERKINS, F.C.S., MERCANTILE, AGRICULTURAL, AND CONSULTING CHEMIST.
J. W. PERKINS begs to inform his friends and the public interested in mines, agriculture, and mercantile transactions, that he may be CONSULTED upon subjects pertaining to SCIENTIFIC CHEMISTRY. ANALYSES and ASSAYS performed.
2, Poplar-terrace, Poplar. 38

ELECTRO-CHEMICAL REDUCTION OF ALL THE METALS FROM THEIR ORES.—Mr. CALVERT'S LATEST DISCOVERIES enable him to TREAT ORES at the MOUTH of the MINE, thereby saving the great expense of carriage and fuel. His process is inexpensive, and entirely supersedes the disadvantages of the old acid method. Those who wish to avail themselves of this important invention, can apply to Mr. HENSON, 113, Strand, London. 39

MINES SURVEYED, AND PLANS AND SECTIONS MADE of any PROPERTY at HOME or ABROAD, by Mr. JOHN CALVERT, MINING GEOLOGIST and MINERALOGIST, whose great practical experience in Foreign and English mining well adapts him for exploring maiden ground, valuing lodes, veins, and setts, and whose judgment is constantly the means of enhancing the value of mineral property, which would otherwise be neglected, or improperly worked.
189, Strand, London. 40

WANTED, a SITUATION, as MANAGER of IRON WORKS, by a party who has had considerable experience in very large forges, in making shafts, &c., up to 20 tons; or he would take a ROLL TURNER'S SITUATION, having worked for some time in that department. Undeniable references can be given.—Address, "M. D.," *Mining Journal* office, 26, Fleet-street, London 41

WANTED, by a YOUNG MAN (Age 23), a SITUATION. Is a thoroughly PRACTICAL MINER. Can assay copper, silver, lead, &c., and undertake dialling, if required. Can give testimonials from the most respectable parties in the county of Cornwall; and would prefer going abroad, either for a company, or with a private gentleman.—Address, "M. B.," *Mining Journal* office, 26, Fleet-street, London. 42

TO CAPITALISTS.—WANTED, £1000—PARTNERSHIP OR OTHERWISE.—A GENTLEMAN, who has a LEASE of a very valuable BARYTES and LEAD ORE MINE in North Wales, near to railway and smelting works, and on which £1200 has been lately expended, is in WANT of a PARTNER with £1000, further to prosecute the works. There is now laid open and dry about 1500 tons (estimated) of barytes, with lead ore mixed through it, ready to get to surface. The annual return for this investment, from barytes alone, will give 50 to 60 per cent. profit. The sett is over a large extent of fine mineral ground, and presents an opportunity seldom met with.—Every information will be given to applications addressed "G. M.," *Mining Journal* office, 26, Fleet-street, London. 43

TO CAPITALISTS.—A PARTY who has a LEASE FOR EVER for some valuable TIN MINES in SPAIN, is willing to PART with his INTEREST with the following conditions:—1. The capitalists to have the sole and full control and management, the proprietors of the mines possessing the right of examining the books, to see that all is properly carried on.—2. The first nett profits to go towards paying off the capital, and an annual interest at the rate of 4 per cent.; and when the capital is paid off, with corresponding interest, then the nett profits to be divided amongst the capitalists and proprietors of the mine.
For terms and particulars, apply to Mr. JOHN HAMILTON CLEMENT, consulting mining engineer, 4, Union-court, Old Broad-street, London. 44

WENDRON CONSOLS, NEAR HELSTON, CORNWALL.—TWO SHARES TO BE DISPOSED OF in this valuable TIN MINE.—Apply to Mr. HODGES, County Court, Hanley, Staffordshire. 45

ON SALE, TWENTY or THIRTY SHARES in PORKELLIS UNITED TIN MINE, for cash; should be glad of an offer.—Address, "M. G.," *Mining Journal* office, 26, Fleet-street, London. 46

RAILS.—FOR SALE, 500 tons BRIDGE SECTION, 59 lbs. per yard, 3 in. high, suitable for permanent way or sidings; also, 50 tons JOINT PLATES for same; all new.—Apply to JOHN H. AUSTIN and Co., rail brokers, No. 1, Fenchurch-street, London. 47

WANTED, 50 tons 11-16 BOILER RIVETS.—Apply by letter, post paid, stating price, to Mr. WOOD, care of John Beauchamp, Esq., Wells, Somersetshire. 48

BLOWING ENGINE.—WANTED, a SECOND-HAND BLOWING ENGINE, of power sufficient for three blast furnaces.—Particulars to be sent, addressed "M. F.," *Mining Journal* office, 26, Fleet-street, London. 49

THE MIDLAND IRON COMPANY, ROTHERHAM, YORKSHIRE, MANUFACTURERS OF RAILWAY TYRES AND AXLES FOR LOCOMOTIVE ENGINES, CARRIAGE AND WAGON WHEELS. From the tests to which this iron has been submitted by engineers and railway companies during several years, its superior quality has been generally acknowledged, and can be unhesitatingly affirmed. 50

Now ready, price Sixpence,
REVIEW OF BRITISH MINING IN THE QUARTER ENDING 30TH JUNE, 1856; with a few Particulars of the Position and Prospects of some of the principal Dividend and Progressive Mines.
By J. H. MURCHISON, Esq., F.G.S., F.S.S.,
Author of *British Mines considered as a Means of Investment*.
Copies may be obtained at Mr. MURCHISON'S offices, No. 117, Bishopsgate-street Within; and at the *Mining Journal* office, 26, Fleet-street, London. 51

GALLT-Y-FFRITH RHEDYN LEAD MINING COMPANY (LIMITED).—5000 shares at £10 each.

The MEMORANDUM OF ASSOCIATION NOW LIES FOR SIGNATURE at the offices of the company, and, when fully signed, will be registered under the Act which limits liability to shareholders. Parties holding certificates of shares are requested to sign it forthwith.

Applications may be made for the 400 shares unsold, at £3 deposit, following the report of the 17th July. No further calls for twelve months, and then, if required, not to exceed 3s. 6d. per share, and at intervals of three months. 52

Offices, 9, Austinfriars, Aug. 5, 1856. WILLIAM EVANS, Sec.

TREBURGETT CROWAN CONSOLIDATED COPPER MINING COMPANY (LIMITED BY ACT OF PARLIAMENT).

SITUATE IN THE PARISH OF CROWAN, THE BEST MINING DISTRICT IN CORNWALL.

Capital £50,000, in 5000 shares of £10 each.—Deposit £5 per share.

The old shares of £1 each in the Treburgett Consols Mine will be received in exchange, and in payment of the deposit of £5 per share.

MANAGING DIRECTOR—John Pace, Esq., 9, Austinfriars.
BANKERS—Unity Bank, Unity-buildings, Cannon-street.
SOLICITORS—Messrs. Baker and Knight, 34, Lime-street.
BROKER—Peter Watson, Esq., 57, Threadneedle-street.
SECRETARY—Mr. William Evans.

OFFICES,—No. 9, AUSTINFRIARS, LONDON.

Applications are yet required for the 3000 shares unsold; the whole must be applied for prior to an allotment being made.

The capital of the company is £50,000, divided into 5000 shares of £10 each, whereupon a deposit of £5 per share is to be paid, and the remainder called for as required for the mining operations, by instalments not exceeding 3s. 6d. per share, and that at intervals of not less than three months.

Prospectuses may be obtained at the offices of the company.

WILLIAM EVANS, Sec.

FORM OF APPLICATION FOR SHARES.

To the Directors of the Treburgett Crowan Consolidated Copper Mining Company (Limited).

GENTLEMEN,—I request you to allot me shares in your company, of £10 each, on which I enclose you a deposit of £1 per share, and hereby undertake to accept such shares, or any less number, and to pay the further sum of £4 per share on allotment, and the further calls as required, up to £10 per share, subject to the provisions of the Act of Parliament which limits liability to shareholders.

I am, Gentlemen, your obedient servant,
Name in full.....
Residence .....
Profession or business .....

THE MINERS' ELECTRO-CHEMICAL PROCESS, FOR THE REDUCTION AND SEPARATION OF METALS FROM THEIR ORES.

By Her Majesty's Royal Letters Patent. 54

PATENTEES—Matt. French Wagstaffe, Esq., M.R.C.S., Walcot-place West, Lambeth; John William Perkins, Esq., F.C.S., Poplar-terrace, Poplar.

Licenses will be granted to mine owners and mining companies for the adoption of the process on terms which may be obtained on application to the patentees, at No. 2, Poplar-terrace, Poplar; or to the solicitor, THOMAS LEE, Esq., 26, Moorgate-street.

SLATE.—The BANGOR ROYAL SLATE COMPANY have now ON HAND a large assortment of ROOFING SLATES, BLUE and GREEN, of the usual sizes, which they are prepared to SUPPLY on the usual terms, for shipment from their depôt at Bangor, or to transmit by railway; also, SLABS of all sizes. Orders to be addressed to Mr. EDWARDS, manager, Royal Slate Quarries, Bangor. 55

SLATE SLABS AND ROOFING SLATES.—

The PROPRIETORS of the NEW MACHNO SLATE and SLAB COMPANY (LIMITED) have, at great cost, made arrangements to convey their produce from their quarries near Ffestiniog to Conway, to obtain the great advantage of access to the railway, giving them the facility of executing orders without the slightest delay. They trust that making Conway their shipping port will not cause them to be confounded with those hitherto known as the CONWAY SLATES, as the MACHNO SLATES are ENTIRELY FREE from PYRITES, or any metallic substance liable to OXIDATION; and, from having been tested in Wales for at least half-a-century, are found to attain a degree of hardness, by exposure to the atmosphere, unknown in any other vein. The MACHNO SLABS are too well known to need comment, but the annexed valuable testimonial from Mr. Magnus, and also a strong chemical test to which they have been subjected, will better explain their quality:—

Pimlico Slate Works, Upper Belgrave-place, London, April 7, 1855.—GENTLEMEN: I very readily offer my testimony to the excellence of your slabs raised at the Machno Quarries. I prefer them to all others obtained in North Wales, with one exception, and that is much of the same quality as the Machno. The slabs can be obtained of large sizes, and of every requisite thickness. They are homogeneous in texture, strong, of good colour, free from spots and other impurities, pleasant to the tool of the mason, easily planed and moulded, and will bear exposure to a much higher degree of heat than slabs from any of the Carnarvonshire quarries.

Signed, G. E. MAGNUS.

To the Proprietors of the Machno Slate and Slab Quarries.

Liverpool, Oct. 18, 1855.—DEAR SIR: The experiments which I have tried on the specimen of slate, in reference to its capability of resistance to acids, enable me to pronounce it in every way capable of retaining boiling vinegar, without injury either to its own substance, or to the contained vinegar. A piece of the slate, weighing 95 grs., was exposed for 36 hours to the action of cold strong nitric acid; it was then boiled in the same acid for 20 minutes, and when washed, dried, and weighed, was found not to have lost perceptibly in weight. This I consider the most conclusive experiment. Signed, GEO. C. HUSON.

Wm. Orme Carter, Esq., Machno Slate and Slab Company. 56

All communications must be addressed to the resident director, Mr. T. H. WHEELER, Conway, North Wales.

UNITY FIRE INSURANCE ASSOCIATION.

Capital £2,000,000 sterling.

CHIEF OFFICES..... UNITY BUILDINGS, 8, CANNON STREET, CITY.
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This association offers advantages to insurers such as are not to be found in any other existing institution, including the division of two-thirds of the profits, thus eventually reducing most materially the premium for insurance.—For additional particulars, apply to THOMAS H. BAYLIS, Managing Director.

PROGRESS OF BUSINESS.

	No. of policies effected.	Amount insured.
1st Year, ending September 28, 1853	4,277	£2,398,994
2d Year, ending September 28, 1854.....	10,107	7,428,018
3d Year, ending September 28, 1855.....	10,871	7,556,496
Nine months, ending June 28, 1856	7,747	4,891,708
Total	33,002	£22,275,200

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NOTICE TO INVENTORS AND PATENTEES.—The OFFICES for PROCURING PATENTS are REMOVED to No. 32, ESSEX STREET, STRAND, LONDON, where all information (British and foreign) may be obtained gratis.—AVERY and Co., patent agents and negociators. 62

NATIONAL BRAZILIAN MINING ASSOCIATION. TO THE CREDITORS AND SHAREHOLDERS.

In the peculiar situation in which I find myself, I deem it due to my friends and self, as well as to you, to state my views as to the settlement of all just claims upon the property of this association.

In so doing, I wish previously to rectify a misstatement which has been made, even in the Court of Chancery, upon two essential points—1. That I promised to attend a meeting of shareholders on the 9th April, 1855.—2. That I pledged myself not to leave England for Brazils. Both these assertions are entirely destitute of truth.

Having thus far contradicted, which I most solemnly do, these statements, made to my prejudice, I will now proceed to lay before you the terms upon which I will convey to parties legally nominated for the purpose the whole of the properties in Brazil, with the original grants of lands, minerals, waters, &c., commencing from those conceded by Don Joseph, King of Portugal.

1. A sum of money to be deposited in the Commercial Bank of London, in my name and that of another person hereafter to be nominated, sufficient to pay all the debts of the association (with interest upon the same), as recognised by the Committee of Shareholders in the year 1849, and by the auditors up to the year 1853.

2. The checks for the payment of the debts to be signed by myself and the party so nominated, and to be accompanied by a receipt in full of all demands from the creditors to whom they are given.

I will not consent to re-open any account which has been passed and audited; but I am ready to have any yet unaudited account, whether of London or Brazil, including every gold, sterling, or milreis account, audited by two parties, one chosen by myself and the other legally nominated.

My claim as to the Emily Mine I am willing to have arbitrated on the spot (where local evidence of facts is easily attainable), in accordance with the laws of the Brazilian empire, or to abide the award of the Brazilian courts of law. 63

Although I have received no support either from creditor or shareholder, I am most unwilling to take advantage of my entire power over the whole of the property; but should the above propositions fail of success, I shall feel perfectly justified in adopting the most prompt and efficient measures for the satisfaction of my own claims.

Paris, Aug. 28, 1856. EDWARD OXENFORD.

THE LEVANT MINERAL COMPANY (LIMITED).

Capital £350,000, in 35,000 shares of £10 each (with power to increase).

£4 per share only to be called up at present.

TEMPORARY OFFICES,—2, NEW BROAD STREET.

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BANKERS—London: Messrs. Hankey, Fenchurch-street.
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SOLICITORS—Messrs. Bircham, Dalrymple, and Drake, 46, Parliament-street.
BROKERS—Messrs. Laurence, Son, and Pearce, Auction Mart; Messrs. Joshua Hutchinson and Son, 39, Lothbury.
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SECRETARY—E. J. Cole, Esq.

Amongst the most important of the resources of Turkey and the Levant may be ranked their mineral productions. Extensive mines of coal, iron, chromate of iron, lead, copper, and other minerals, are known to exist, the working of which, if prudently conducted, cannot fail to promote the commercial relations between England and the east of Europe, and to produce highly satisfactory results to those investing their capital in the undertaking.

For the purpose of developing these resources, it is proposed to form a company under the Joint-Stock Companies Act, 1856, limiting the liability of the shareholders to the amount of their subscriptions.

It has been considered desirable that the operations of the company should be gradual, commencing with undertakings which previous experience has demonstrated as offering a safe investment with highly remunerative results.

With this view, the promoters have made provisional agreements with parties enjoying exclusive privileges, conceded by the Sultan and the Greek Government, for the supply of emery stone, an article of known importance and increasing consumption. Under the Sultan's firman, the company will have the privilege of working the mines at Scalanova, in Asia Minor; and, under contract with the Greek Government, those at Naxos, as well as in all other parts of the empire and kingdom.

The annual consumption of emery stone in Europe was calculated two years since at 3000 tons. Recent investigations, by persons intimate with the trade, have, however, led to the conclusion that the above is an under-estimate; and looking to the increased manufacture and use of plate glass, machinery, steel, and other substances, for the polishing of which emery stone is necessary, the demand may reasonably be expected largely to increase.

In order to simplify the operations of the proposed company as much as possible, the promoters have made a further provisional arrangement with competent parties to extract the emery stone from the mines, and deliver, at fixed prices, such quantities as the company may desire at Smyrna, where it will be handed over to the company's agent for shipment to Europe or elsewhere.

The provisional directors have had elaborate details submitted to their consideration, based upon the existing demand and supply of emery, and having carefully investigated the subject, aided by gentlemen practically acquainted with the trade, they have satisfied themselves of the soundness of the proposed undertaking, and the prospect which it holds out of very profitable returns for the capital invested. These details will be submitted, on application at the offices, to any parties desiring to take a substantial interest in the undertaking, and fully warrant the provisional directors in stating that, from this source alone, dividends at the rate of 10 per cent. may be calculated upon, even for the first 12 months, with progressive increase in future years.

No increase of called-up capital, beyond the £4 per share payable upon allotment, will be made, except with the concurrence of the shareholders at a general meeting, convened for the purpose of considering whether the operations of the company shall be enlarged.

Official forms of application for shares may be obtained from the brokers; or the secretary, at the offices of the proposed company, 2, New Broad-street.

THE BRITISH STEAM FISHERIES COMPANY (LIMITED).

Capital £100,000, in 10,000 shares of £10 each.

Deposit £1 per share on allotment.

Calls of (not exceeding) £3 each, and at intervals of not less than three months.

With power to increase the capital.

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ENGINEER—T. B. Winter, Esq., 28, Moorgate-street.
BANKERS—The City Bank, Threadneedle-street. 65
BROKERS—In London: Walter G. Taunton, Esq., 26, Birchin-lane.
In Edinburgh: Messrs. Allan and Dunlop, 4, St. Andrew's-square.
AUDITORS—Henry Lloyd Morgan, Esq., Langbourn Chambers, Fenchurch-street; Henry Ayres, Esq., 45, Cornhill.
FACTOR IN LONDON—Mr. James E. Saunders, 105, Upper Thames-street.

OFFICES,—COUNTY CHAMBERS, 14, CORNHILL, LONDON.

PROSPECTUS.

The progress and improvement of the British Fisheries is a national object, in which all classes of the community are interested. The wealth and energies of the United Kingdom are in other channels rapidly developing our great industrial resources; but our fisheries remain in the same state in which they were two centuries ago. Our increasing population requires that every means that art and science can devise should be adopted, in order to procure the necessaries of life as abundantly and cheaply as possible; but though it is well known that the seas which surround the British Isles teem with abundance of fish, yet the supply of that article of food is always uncertain, and its price, generally high, is often exorbitant.

The British fisheries, if conducted on a proper system, and on a scale of sufficient magnitude, are capable of yielding an abundant supply of wholesome food. There is no branch of our national industry to which steam-power can be more advantageously and profitably applied. Fishing banks as yet untouched, because they could not be reached by the present sailing craft employed in the trade, may, by means of steam-power, be made available for a vastly increased and more regular supply of fish.

Hitherto our fisheries have been prosecuted only by the coast fishermen in sailing vessels at particular seasons, and the principal part of the fish caught has been cured for export, or sent to London, where the demand may be said to be almost unlimited.

By the adoption of steam-power, the regular and daily supply of this article of food in the freshest state would be extended to the principal ports of the United Kingdom, to be thence conveyed by rail to the cities and towns of the interior.

It is admitted by the trade that the quantity of fish is not half of that which might be sold, provided the supply were regular. It is, therefore, proposed to establish the British Steam Fisheries Company, for the purpose of combining capital with skill, and by means of vessels steam-vessels to develop, in a manner that has never been attempted before, the inexhaustible resources of the sea, and to convey the fish caught or purchased with speed and regularity to the best markets.

As a commercial enterprise, this company presents undoubted advantages; and while it will give constant employment to a great many seamen and boys, in addition to those already engaged in the trade, it is calculated that it will, after defraying every expense, secure to the shareholders a return of from 20 to 25 per cent. on the capital expended.

The directors propose to commence with a capital of £100,000, in shares of £10 each (with power to increase); and to place steamers at different ports on the coasts of England and Scotland, nearest to the fishing banks in the North Sea, and afterwards to extend the operations of the company to foreign fisheries, as the success of the undertaking may justify.

All sales of fish being for cash, a dividend can be paid quarterly.

Applications for shares to be made in the annexed form, addressed to the Directors of the British Steam Fisheries Company (Limited), at their offices, County Chambers, 14, Cornhill, London; or to the brokers of the company, WALTER G. TAUNTON, Esq., 26, Birchin-lane, London; and Messrs. ALLAN and DUNLOP, St. Andrew's-square, Edinburgh.

The deposit of £1 per share is to be paid to the bankers, or at the offices of the company, upon allotment, for which a voucher will be given.

FORM OF APPLICATION FOR SHARES.

To the Directors of the British Steam Fisheries Company (Limited).

GENTLEMEN,—I request that you will allot me shares, of £10 each, in the above-named company; and I hereby agree to accept the same, or any less number that may be allotted to me, and to pay the calls thereon at the appointed times, and to execute all necessary documents when required to do so.

I am, Gentlemen, your obedient servant,
Name .....
Profession or occupation .....
Place of residence .....
Date..... Place of business, if any .....

MINING IN JAMAICA.

We have received despatches to Aug. 9. The *Colonial Standard* states: "The success with which the mineral wealth, which we have never doubted to exist in this island, is being gradually developed is one of the most gratifying circumstances in connection with the future of Jamaica. It is unnecessary to show the immense benefit which must result to the island from the permanent establishment of a number of prosperous mines in various districts scattered over the country, and it is highly satisfactory to be enabled to feel a moral conviction that these important results are no longer problematical. The disclosures already made prove Jamaica to be undeniably a rich mineral country, and there are at this moment six companies in active operation, each of which in its own particular developments may be adduced as evidence of the truth of the statement. It is no longer a matter of doubt that copper ores, distributed in lodes as regular as any ever worked upon in Cornwall or elsewhere, and of a produce far beyond those raised in any part of the west of England, exist in Jamaica. Half a dozen companies have proved this. The mine at Charing Cross, in Clarendon, is as well ascertained a mine as Wheal Agnes, or any one newly-opened mine in Devonshire. Nay, at this moment its ends might be placed in competition with those of 40 out of 50 of the mines whose shares are quoted at a premium on 'Change in the *Mining Journal*. The Charing Cross Mine, in fact, is already as completely a mine as any non-dividend paying mine in Europe. No one who has examined the ores which are now in course of extraction from the 50 fm. level can hesitate for a moment to pronounce the success of that adventure anything but the work of time. The ore was taken out at a depth of 390 feet from surface, and at the end of upwards of 300 feet of horizontal driving. In quality it is one of the most splendid masses of sulphuret, and its value in a geological point of view is greatly increased by the fact that it is embedded throughout in a highly crystallised quartz, which at this depth has for the first time developed itself. It would be enough for Jamaica that one mine should be admitted. The saying is that Jamaica has no mines at all. It is quite certain that there are at least a dozen mines already opened, and ascertained, by the agency of half a dozen companies. There is certainly a mine at Stamford Hill which needs only to be worked in depth to be highly productive. There is a most valuable mine at a property worked by the Messrs. Smith, which in a year or two will be second to none in the world. There is a mine at Salisbury Plain, in St. Andrew, with a strength of lode almost without parallel, being nearly 60 feet wide, now under work by the Ellerslie and Hardowie Company."

At a meeting of Wheal Jamaica, on Aug. 5, a call of 4s. per share was unanimously agreed to. The following report, received by the directors from their mining agent at Charing Cross, was presented to the meeting:—"In the new stopes, in back of No. 1, we have a branch of ore from 3 to 4 in. thick, averaging about 3 cwts. of ore per fm. In Schute's stopes, in back of No. 2, the branch of ore is from 6 to 9 in. thick, yielding from 10 to 15 cwts. of ore per fm.; in the stopes in bottom of No. 2 we have a branch from 4 to 6 in. thick standing, which we intend shortly to take down; these stopes appear to be improving as we go northward. Ellison's winze, in the bottom of No. 3, is now down 8 fms.; we have 2 fms. more to sink to the 50, which we hope to effect in about another fortnight, when we propose to recommence driving the end of No. 3 level. The lode in the 50 is from 5 to 6 feet wide; the branch of ore is 4 in. thick, yielding excellent saving work. In the dressing department, we are busily engaged in bucking and jigging what we have taken out from the 50, in order to bring the same to as high a per centage as possible, and which, when complete, we have every reason to believe will bring a high price."

The Clarendon Consolidated Mining Company have advices from the Hon. E. Thompson and Capt. Harpur, to Aug. 8, from which the following is abstracted:—"The lode in the stopes in bottom of the 22 fm. level, at Stamford Hill, is over 9 ft. wide—porphyry, spar, iron, and stones of yellow copper ore, with a branch about 1 ft. wide on the hanging wall side, producing some very rich yellow and variegated copper ore, and which I am glad to say lengthens both eastward and westward as we go down; from this place we are taking out good work for the dressing-floors. The 35, south-west of shaft, I have suspended for the present, and put the men in the shaft. In the 35, north-east of shaft, the lode has a very favourable appearance indeed, being about 8 ft. wide, composed of flookan, porphyry, spar, and oxide of iron, with a large quantity of the oxides and carbonates of copper, and stones of yellow copper ore; in the stopes in back of the 35 the lode is large, producing some saving work for the dressing-floors. We have still a small stream of water to contend with in the shaft; the portion of the lode which we are carrying down with us continues to present the same favourable appearance it has for some time past, consisting of flookan, spar, iron, and prian, intermixed with yellow copper ore. The ground in the 46 cross-cut is hard for driving through; I hope, however, for a change here shortly. In the 58 cross-cut the ground is also hard for working. I enclose you particulars of work done, and number of people employed, during the past month."

MINING ON LAKE SUPERIOR.

RIDGE MINE.—Clark shaft has nearly reached the 70 fm. level, where the lode is 4 ft. wide, producing mass, barrel, and stamps copper, a very fine lode; paying $10 50 c. per foot for sinking. The stopes east of Clark shaft, in sole of the 60, is also producing mass, barrel, and stamps work; lode 4½ ft. wide, stoping by four men, at $4 25 c. per foot. The 60, driving east from Clark shaft, is producing fine barrel and stamps work; lode 3 feet wide, driving by four men, at $3 50 c. per foot. The roof of the 45, east of Hanna shaft, is now stoping by eight men, at $4 25 c. per foot; the lode is 3½ ft. wide, producing rich barrel and stamps work. On the whole the mine is much improved, and is now more than covering current expenses. Last month, on an expense of $2375 25 c., we have taken out 7 tons 13 cwts. 13 lbs., worth 75 per cent. for copper. The prospects now before us will fully warrant an estimate of the same kind in future.—HENRY BUZZO, Agent.

MASS MINE.—No. 1 shaft, on middle vein, or lode, is now 50 feet deep from surface. This shaft has principally been sunk under the vein; of late we have stripped down the vein 4 feet in width, 9 feet in length, and about 12 feet in depth, which has produced 13 tons mass copper, of about 60 per cent. Copper is yet projecting out in each end of the shaft, and all through the vein, so far down as we have broken the vein. The shaft is now sinking by six men, at $15 per foot, the party to provide all expenses necessary for the same.—SOUTH VEIN: This vein is 120 feet south of the middle vein, and is 3 feet wide; a shaft is now sinking in this vein, by six men, at $12 per ft., the party to provide all necessary expenses for the same; are down about 6 ft. from surface, where 1 ton of copper of 60 per cent. has been taken. In the present bottom of the shaft pure chinks of copper ore, exposing from 10 lbs. to 80 lbs. weight. This cannot fail being a very profitable mine; we do not go by kindly indications without copper, but have the copper turning out to warrant such an opinion. Another vein is also seen, north of the first, from 350 ft. to 360 ft.; we succeeded in uncovering the top of it, and find it about 3 ft. wide, full of lumps of pure copper, but, from the heavy quantity of water pouring up through the vein, we are compelled to go down north to bring up a short adit level; when this is completed, we contemplate sinking in the vein immediately, with full force of miners. Our veins in this, as well as the Ridge, do underlay about 45 degrees, allowing good opportunity to lay down railroad tracks. This principle is adopted at the Ridge, and will be also at the Mass Mine. This location has lately been purchased from Mr. J. Carson, of Ontonagon, by a Pittsburgh company, who are the principal stockholders in the Cliff, National, and other mines; and, after a visit to this mine, are gone back fully satisfied they have a valuable property. Transactions in this stock have been from $5 to $8; 20,000 shares.—H. BUZZO.—*Ontonagon, Lake Superior, Aug. 12.*

TREATMENT OF GOLD QUARTZ IN AUSTRALIA.—By the last arrival, we have particulars of some parcels of gold submitted to assay by Mr. Birkmyre, the assay master to the Port Phillip and Colonial Gold Company, and the result is reported as follows:—"Gold from the Nicholson River, Gipps Land, melted and assayed for the Union Bank of Australia, Melbourne:—Before melting, 7 ozs. 5 dwts. After melting: Ingot, No. 23, 6 ozs. 19 dwts. 18 grs.; scrape, 2 dwts. 12 grs.=7 ozs. 2 dwts. 6 grs. Loss per cent, 1 9. Assay, 23 carats 2 c. gr. Mint value in London, 4*l.* 3*s.* 2*d.* per oz."

The following are returns of the proceeds of 12 parcels of quartz from Anderson's Creek, a gold field 16 miles from Melbourne, which have been crushed from time to time at the Port Phillip Foundry, by Dr. Otway's patented Chilian mill, and retorted in the usual manner. The parcels weighed in the aggregate 30¾ tons, from which 443 ozs. of gold were obtained:—

	tons	cwts.	qrs.		ozs.	dwts.
Anderson's Creek	1	17	0	.....Yield	11	5
Ditto	2	0	0	.....	16	16
Ditto	2	0	0	.....	30	0
Ditto	1	0	0	.....	1	1
Ditto	6	0	0	.....	144	0
Ditto	2	3	0	.....	30	0
Ditto	0	10	3	.....	shicer	
Ditto	1	17	0	.....	28	10
Ditto	2	0	0	.....	9	0
Ditto	1	2	1	.....	15	7
Ditto	7	0	0	.....	96	18
Ditto	3	5	1	.....	60	13
Total	30	15	1	.....	443	10

At the older fields, the systematic washing of the soil and the quartz mining are being steadily prosecuted.

AMERICAN STEEL TRADE.—A correspondent of the *Birmingham Journal* says—"The interest felt in this manufacture keeps pace with that taken in iron making. There are twelve steel-making establishments now in operation, and four new ones nearly ready, which will commence working during the present year. The aggregate produce of the twelve is 13,000 tons per annum, including both cast and shear steel, but chiefly spring steel. Not many of them, however, are worked to their full extent, and nearly all, owing to a prejudice among consumers against using American steel, have found it necessary to add to their business the manufacture of files, vices, hammers, axes, springs, saws, &c. There is no doubt plenty of suitable material for making steel, and indeed it has been sufficiently proved that it can be made in the United States of a quality unsurpassed, but the chief trouble with all the works is want of capital; moneyed men will not invest largely in a speculation which has to contend against a deeply-rooted prejudice, and in which they are never certain that a few months may not spring upon them some new tariff, to overthrow their chances of success. The English steel makers, although possessing to a great extent a monopoly of the famous Dannemora iron, command this market chiefly by the superior uniformity of their product, not by any actual superiority in the metal, when properly carbonised. In cast-steel, for instance, each bar, as broken and mixed in England, is rapidly assorted into several varieties, some of which are finally made into different qualities of steel, or if not, are compelled to undergo somewhat different processes in the manufacture. American works, on the contrary, are compelled too often to adopt the temporary system of waiting for an order, and then carbonising as well as may be, and mixing together—a process that cannot produce as uniform results, hence the buyer is never certain of the temper of the article."

MANUFACTURE OF GAS.—The process of making coal-gas is much simpler than many persons imagine. Bituminous coal is thrown into a hot cylinder of iron, the mouth of which is closed carefully by an iron door, with the edges cemented with soft clay. The vapour arising from the coal is received into a tube, by means of which it is permitted to escape into a series of vessels, where it is cooled, and deposits much of its impure matter. It is then poured into another series of vessels, containing quicklime, which robs it of its sulphurous and other intermixtures. From this receiver it flows purified into the gasometer, and is from thence distributed as may be needed, through mains and service-pipes. The highly-charged bituminous coals are found best adapted to the purpose of gas-making. In the manufacture of gas from Newcastle coal, a chaldron weighing 24 cwts. is found to yield 8650 cubic feet of gas; 14 cwts. of coke, 12½ gals. of ammoniacal liquor, and 12 gals. of thick tar. Cannel coal will yield, on an average, 16,000 cubic feet of gas to the chaldron.—*Hunt's New York Merchants' Magazine.*

Original Correspondence.

BESSEMER'S NEW IRON-MAKING PROCESS.

...—I entirely approve of the distinction drawn by Mr. Sanderson, in your last ...per, between steel and cast-steel as it is, and the products which may or may not be produced by Mr. Bessemer's process. It will be certainly much more than I expected if the crude ingots from his furnaces can be at once wrought into the fine tools which Mr. Sanderson enumerates. But, whatever may eventually be made of it, I look on the steel part of the manipulation as a secondary question. Mr. Sanderson knows as well as I do, and I am sure, as I can pretend to be with the innumerable ...ron-making patents that are continually being taken to produce Swedish steel in England—past and every conceivable substance being enlisted in the service. They are ...ll of commercial and manufacturing misconceptions, regular joint-stock work, ...ch of which one of the commonest features is the usual delusive figuring; if Swedish ...ells in England for 20*l.*, what a profit we shall raise by making it for 3*l.*! The ...ell-to, I habitually class gold grinding and Swedish steel-making in the same category ...f the one-sided delusions of ignorant money hunters; and this prepossession had ...revented me from looking into the details of Mr. Bessemer's invention, under the impression that it was some charcoal-iron making scheme, gas-fuel process, or other mis-...ers in search after *quality*. As a general rule, the amateur ironmaking patentees are ...ery much run away with by words of which they do not know the import as the ...gas-burners. The great feature of Mr. Bessemer's invention lies in the following ...assage from his paper:—" When we consider the vast extent of the manufacture, ...and the gigantic scale on which the early stages of the process is conducted, it is ...evident that no effort should have been made to raise the after processes somewhat ...nearer to a level commensurate with the preceding ones, and thus rescue the trade ...from the trammels which have so long surrounded it."

...ere lies the true conception of the inventor. When Cort invented the puddling ...process, a blast-furnace which produced regularly 20 tons of pig-iron per week ...was a prodigious concern; now more than ten times that quantity is made ...in one furnace; and it will be in the providing a malleableising process of correspondingly increased magnitude that Mr. Bessemer will find the true element of success. With the mistaken notions which prevail, and are set forth at every ...turn, to back some railway scheme, or other money-abstracting concoction, it is not surprising that Mr. Bessemer should dilate, with considerable satisfaction, on the ...cheapness and quality of his produce. So general are these notions, that I lately saw, in a Swedish charcoal-iron puff, dated "Laboratory, Jermyn-street," which, considering the pretensions of the establishment whence it issued, cannot be characterised as anything less than a scandalous document; and it is natural that private men should dwell much on what supposed authorities hold up to estimation. I have already anticipated that it is possible difficulty may, in the first instance, arise as to the ductility of the cast malleable ingots, but if they are found to possess not more than half the tenacity of puddled bars in the first stage, it is quite immaterial what becomes of the steel part of the patent. Once grasp a great principle, such as is displayed in the decarbonising of cast-iron, on this great scale, without fuel and with-...out labour, the minor details required for perfecting the principle are merely matters of time and perseverance. The demand of the age is not for quality but for quantity, and in meeting this Mr. Bessemer will carry everything else along with him, quality ...or no, where it is required.

...Now, in reference to this point, the description of the experiment at Baxter House ...affords evidence deficiency compared with the paper read at Cheltenham, of very great importance indeed, but I conceive the difference must be attributed to the small quantity of ...iron operated on in London. Quantity is most important for maintaining the due ...temperature in such an operation. The unqualified praise I have given to this invention is based on the assertion, that the temperature continues to rise as the carbon ...is consumed; and that, finally, the pure malleable iron, in complete liquidity, is run ...into the moulds. At Baxter House, we hear of a cast of semi-steel, and of a spongy ...mass of malleable iron. This makes all the difference in the world, for to break up ...a mass of spongy iron inside the cupel, of 5 tons weight, and carry it in due time to ...the rollers, would be ten times worse than puddling, instead of a hundred times better. ...But the peculiar excellence of Swedish iron is due to its having never been decided; it ...differs from the mere absence of pit-coal fuel, as we commonly see set forth for principles. There are all qualities of wood charcoal iron—good, bad, and indifferent. ...Until it be either ascertained what peculiarity in the ore gives the quality, and schemers ...cease to work without even an accurate analysis of its constituents. My late father, ...by his usual indefatigable experiment, ascertained that best Swedish and Russian ...iron contained an appreciable alloy of carbon, but we are not to suppose that ...this is the quality: it is the possession of quality from some unknown source, which ...will allow it to bear an alloy which would injure the tenacity of common iron. What ...quality, or qualities, of Mr. Bessemer's iron may be, resulting from so peculiar ...a process, we have no data to predict; it is matter solely for experiment, not speculation; *a vera ignota*, in which results may contradict all our conceptions.

...To writers who limit their criticisms to the want of novelty in blowing air, &c., into fluid iron, do not appear yet to have formed an idea what the invention is. As to the "Puddler," who has "retired," and, therefore, ceases himself to ...have any active interest in puddling, he must, I conceive, have a large family of ...puddlers stirring him to write with such acrimonious jealousy. He must rub ...out of his little his "pseudo-chemistry," and learn the difference as respects temperature ...arising from the decomposition of water and air, tell us how the latent heat of ...steam is got out of it on resolution to its constituent gases, and what are the relative quantities of oxygen in a cubic foot of steam at 20 lbs. pressure, and in a cubic ...foot of air at 10 lbs. pressure.

...With reference to the doubts thrown on the available ductility of the iron from the ...new process, it will be very apposite here to call to mind that, in 1783, no less an ...authority than James Watt wrote, in a private letter to Dr. Black, a complete demonstration, as he supposed, of the impossibility of Cort making any iron by his ...puddling process suited to our wants; that it must necessarily be an impracticable, ...short, crystalline substance. His arguments did not convince Dr. Black. Time ...has been the umpire between them. Once invent a process which grasps a great ...agency, and which established manufacturers have no interest in opposing, but the ...very, every conceivable difficulty will bow before it. DAVID MUSHET.

Sept. 2.

SALT IN IRON MAKING.

...—In reference to Mr. J. H. Williamson's enquiry, I beg to state that, more than ...ten years since, when my late father was connected with the King of Holland's iron-...works in the iron-works at Seraing, he took both English and foreign patents for a ...process of salt in the puddling furnace. I have not the specification, and do not remember ...the precise object aimed at: I think it was connected with some peculiarity arising ...from the nature of the ore. Mr. J. K. Blackwell's sketch of foreign processes, in his ...paper read at the Society of Arts, last winter, seems to imply that something of the ...kind is still pursued. My father's process was never adopted in this country; but, ...at that time, every available form of alkali has been resorted to by various pro-...cesses.—*Sept.* 2. D. MUSHET.

...route, last week, in reply to Mr. Patterson, line 4, *for* "effect" *read* "effort," ...for "Hall" *read* "Hall," *for* "train" *read* "brain."

IMPROVED MODE OF IRON-SMELTING.

...The following is a copy of a letter in relation to Mr. Mickle's important patents:—

Washington, Durham, Sept. 1.—GENTLEMEN: In the *Mining Journal* of Aug. 23, it ...is stated that, at one of the recent meetings of the British Association, an important ...paper, as to iron-making, was read, on "Dr. Gurlt's invention, which is an attempt ...to introduce into England the principle of gas fuel in a more perfect manner than ...hitherto." Some of those then present, who have read the circular sent by me to the ...proprietors and others in February, and the *Mining Journal* since, possibly consider ...the attempt on the part of Dr. Gurlt superfluous and impossible. The circular was ...circulated through England and Scotland—a few copies have also been sent to the ...Governments of Europe and America—and the *Mining Journal* is widely read.

...I write to you, because of the renowned assembly to whom the paper was submitted, ...because, notwithstanding the (in all probability) accidental similarity of expression in one or two ideas—"gigantic blowpipes," &c.—it is fair to consider that Dr. ...Gurlt is not aware of my patent; if otherwise, the matter would not be noticed now. ...The report gives no precautions from Dr. Gurlt with regard to safety; and the appended reading is that retorts or generators are to be placed beside the furnace, and ...gas to flow thence into it while the air is driven by fan-blast. I should, therefore, fear explosive mixture, or the generators bursting from pressure, and in either ...case explosion.

...What is really a national improvement of paramount importance may chance to be retarded by the results of rashness in experimenting, on the part of any one either ...unacquainted with or careless of the nature of the gases, it is well to state that such ...experiments in the furnace must not be thus undertaken, only, perhaps, to result in ...injury or destruction to men and property.

...The public has already before it all that appears either practical or necessary connected with the new system of smelting; and I need not, therefore, write more. I ...have the honour to enclose copies of circular, and extracts. WM. MICKLE.

...Professor D'Aubeny, President of General Committee; and to

...Professor Phillips, Assistant General Secretary, Oxford.

BESSEMER'S NEW IRON-MAKING PROCESS.

...—In common with many others, I have read with some interest Mr. Bessemer's ...plan of his process for making iron and steel without fuel. A hasty perusal of ...the paper sufficed to show some serious gaps in the description, which I had imagined ...the inventor would have filled up ere now. This has not been done, and I would beg ...to offer a few remarks thereon.

...In the first place, I must premise that the combustion of the carbon in fluid iron ...to protect from blast-furnaces and exposed to the action of a blast of atmospheric air, is now discovery. In my work on iron manufacture, published last year, I described the numerous small jets of blast blowing into the liquid iron in the old ...system of refinery furnace; the combustion of the carbon of the iron by the ...air, the intensity of the heat produced, as exhibited in the fusion of the sandstone ...lining used; and other details, theoretical as well as practical, of the process for refining iron by air blasts. Added to this, the intense heat produced by blowing ...air by into liquid iron holding carbon in mixture or combination, is well known to ...all recent refiners; therefore Mr. Bessemer's assumed discovery of a great principle ...resolves itself into the re-publication of matters previously well known to a numerous ...class of operatives.

...Mr. Bessemer's improvement—if improvement it can be called—consists in shortening the refining operation, so as to complete it with the heat given out by the combustion of the carbon of the liquid iron. This is now admitted by his friends to be the ...whole novelty in his process. The entire blowing lasts only 30 or 35 minutes; in the ...ordinary blast refinery it occupies about 2 hours, and the continuance of the excessive ...temperature for that period is ensured by covering the metal with coke or charcoal. ...The covering of the liquid iron by a carbonaceous fuel is essentially necessary to resist ...the cold by blast, in any form whatever. Mr. Bessemer states that at the maximum ...temperature a portion of the oxygen of the blast combines with the iron which undergoes combustion, and is converted into an oxide. This oxide, we are seriously ...told, is no sooner formed than it is again fused, and forms a powerful solvent of the ...other earthy bases. These statements do Mr. Bessemer no credit. They are in ...direct opposition to all principles of chemical science, and reflect severely on those ...who have eulogised the plan as being in accordance with sound philosophical principles. The newly-formed oxide of iron cannot be fused at any temperature whatever than by depriving it of its oxygen. This is accomplished by bringing the ...oxide in contact with solid or gaseous carbon. Mr. Bessemer professes to use no fuel; ...yet the fusion of the oxide in the manner he describes is a direct impossibility. In the common refinery, by far the larger portion of the oxide formed ascends, and meeting with the stratum of fuel, is again reduced to the metallic state, and falls back into the mass. If the metal is insufficiently covered with incandescent fuel, the oxide is unreduced and, passing violently upwards with the stream of gases, escapes from the chimney as small globules of magnetic oxide, alloyed with silica and other earthy bases. The shower of sparks described by Mr. Bessemer are merely those small globules of oxydised iron, the escape of which is attended with a direct loss of yield. Hence, before he succeeds in the production of a refined metal fit for manufacture into wrought-iron bars at a cheap rate, the inventor must adopt this feature of the old plan, when his apparatus resolves itself into a very common refinery.

Mr. Bessemer committed a great mistake when he claimed for his plan the production of that quality known as charcoal-iron, simply from the refining being conducted without contact with mineral fuel. A superficial acquaintance with the subject would have shown that the quality of the fuel used in the manufacture of a moiety of the bar-iron, so far as regards the usual contaminating ingredients, sulphur and phosphorus, has nothing to do with the ultimate quality of the bar. In the puddling, boiling, and heating furnaces, the fuel is kept separate from the iron; where the refinery is employed, the earthy matters of the fuel passinto the cinder, but the gaseous constituents, from being cooled above the liquid iron, have very little influence on the quality of the product of such fires as receive the iron direct from the blast-furnace. Charcoal-iron is a product of the blast-furnace, and cannot be produced in any subsequent stage of the manufacture.

I cordially agree with Mr. Sanderson, that the iron, after treating by Mr. Bessemer's process, possesses the qualities neither of wrought-iron nor cast-steel. I will not trouble you with extracts from my work bearing on this point, but would remark that malleability is a property never yet communicated to iron at varying temperatures, other than by manipulation in some one or other form. The mere removal of a portion of the impurities with the iron by fusion does not, of itself, convert cast into malleable iron. Castings with a slight degree of malleability, at low temperatures, are common in this country and abroad; at high temperatures they lose this, are equally brittle with other cast-irons, and are utterly devoid of the welding principle.

Mr. David Mushet seems to consider the combustion of a part of the iron as the transcendant merit of Mr. Bessemer's invention. I am unable to see any merit in burning the iron; a great many operatives in iron-works are already adepts at this, as managers and proprietors too well know, and the recommendation to burn the iron a little more will hardly be considered sound advice by the sons of Vulcan. The saving of fuel by the combustion of a portion of the iron is a saving of a few pence at the price of a greater number of shillings—a system which is in direct opposition to the commercial policy of the 19th century.

Mr. Bessemer estimates his malleable cast ingots to lose 5½ per cent. in the finishing rolls. How can pure malleable iron, as he asserts the ingots to be, lose so much in the mere rolling to a bar? If it is thus reduced in weight more than 1 cwt. per ton, the action of the rolls must squeeze out of the so-called pure iron a very large quantity of cinder. In ordinary rolling, the loss of weight in these rolls amounts to no more than 15 or 16 lbs. to the ton.

Mr. Evan Hopkins is in error in ascribing to Mr. John Evans the merit of running the liquid iron direct from the blast to the refining furnace. The patent for this improvement was taken out by the late Sir Josiah J. Guest, and bears date Jan. 21, 1853.

Mr. Mushet claims for his father the credit of first attempting to make wrought-iron direct from the ore. This mode of making wrought-iron has been practised in several countries from the remotest ages, with the production of a quality unsurpassed in modern times; therefore there can be no novelty in the principle.

One other remark, and I will finish this already too long letter. Mr. Bessemer heads his paper "Manufacture of Iron and Steel without Fuel," whereas it appears to be a proposition for making wrought-iron and steel from liquid cast-iron. I say a proposition, because it is not yet known that a process exists for making either. No one has seen the malleable iron equal to charcoal in point of quality to be made by the means described from common irons; there has not been any made and forged into articles to demonstrate the correctness of the patentee's statements. The cast-steel of excellent quality, which it is to produce as cheap as finer's metal, has yet to be made, and exhibited in the shape of articles of cutlery, as a test of quality. A few pieces of refined iron were displayed at the meeting, but these were no more like bars of wrought-iron or steel than chilled cast-iron is like tempered steel. I see chemists and others apparently delighted at some discovery, but the evidences of this discovery are wanting, and until they are forthcoming no one can affirm that there has been any made. Nevertheless, I shall be glad to hear that Mr. Bessemer's description of his invention is more faulty than the process itself. W. TRURAN.

Marsarion, Sept. 2.

IS MR. BESSEMER'S STEEL-MAKING PROCESS, CONSIDERED IN A SCIENTIFIC POINT OF VIEW, A POSSIBILITY?

SIR,—Although so much has been written and said already in relation to this process, I trust you will permit me to say a few words, as I am most anxious to obtain the opinion of scientific men on a point which I venture to think has escaped attention. It is a well-known fact, that the compounds of iron with carbon increase in fusibility with the increasing quantity of carbon; or, in other words, that the more carbon they contain the more readily they melt, thus the temperature which the different compounds require to melt them is generally supposed to be as follows:—

Wrought-iron	4200° Fahr.	Grey cast-iron	3300° Fahr.
Puddled steel	3800° ,,	White cast-iron	3000° ,,
Cast-steel	3600° ,,	Specular iron	2800° ,,

It may be taken as a fact, that the temperature in a blast furnace does not exceed the melting point of cast-steel, inasmuch as all the attempts to smelt cast-steel by blast, and in equal quantities with pig-iron, have completely failed; therefore, it may be assumed that the melted pig-iron, when tapped into Mr. Bessemer's converting vessel, will have a temperature below the melting-point of cast-steel—say, it will be 3500° Fahrenheit.

We also know that the highest amount of carbon contained in the purest specular iron never exceeds 5 per cent., and that the maximum of carbon in coke iron is 3½ per cent. One ton of melted coke pig-iron, when tapped into the converting vessel, may be taken to contain, as a maximum, 70 lbs. of carbon, which, according to Mr. Bessemer's experiment, if burnt with cold air, will suffice to raise the temperature of the decarbonised metal up to the melting temperature of malleable or wrought-iron.

It is well known that 1 lb. of pure carbon, if burnt with cold air, is sufficient to heat 70 lbs. of water from the freezing up to the boiling point, 180° Fahr.; and taking the specific heat of cast-iron to be = 0·1138 (that of water being = 1), the same quantity of carbon would, therefore, be sufficient to heat 623 lbs. of cast-iron to 180° Fahr.; consequently, the 70 lbs. of carbon assumed to be contained in 1 ton of cast-iron, if properly burnt with cold air, would raise its temperature to about 400° Fahr.; and supposing no loss of heat whatever, the temperature of the tapped pig-iron would thus only be increased in the converting vessel of Mr. Bessemer, under the most favourable circumstances, to a temperature which is below the recognised melting point of wrought or malleable iron. When, however, we consider the very great loss of heat which must take place by radiation and by absorption, the increasing temperature would, in all probability, never reach the melting point of steel, supposing, with Mr. Bessemer, that the acquired heat results from burning the carbon contained in the pig-iron.

If, therefore, I am right in my premises, the inevitable conclusion would be as suggested by that eminent steel manufacturer, Mr. Sanderson, in his letter in your last Journal, that Mr. Bessemer's process produces a species of refined cast-iron commonly known as fine metal; but, at the same time, the product would never be anything like steel or malleable iron, and would not admit of welding or annealing, or the ordinary treatment under hammers and rollers which steel and wrought-iron are submitted to. If, however, I am wrong, then I can only suppose that the heat attained by Mr. Bessemer is produced from some cause at present unknown to science; and if this be so, and repeated experiments should discover the cause, Mr. Bessemer will indeed have given a boon to the manufacture world—the value of which it is scarcely possible to estimate.

It is a matter of great regret that the experiment shown by Mr. Bessemer, in London, a few weeks ago, was not extended to the point of testing the metal so produced by his process, and ascertaining whether he did obtain fused malleable iron in ingots; and that if the product really had been a fine quality of steel, as announced in your Journal, it is even a still greater matter of regret that no proof was made by hammering, rolling, welding, or annealing the product, to put the question utterly beyond doubt. Until this be done, I think the trade should pause before any very great reliance is place on this process.—*London, Sept.* 3. INQUIRER.

BESSEMER'S IRON-MAKING PROCESS.

SIR,—In his poetical treatise, called *Hudibras*, that great father of political economy, the famous Samuel Butler, teaches the fundamental truth—a truth disputed by some of the modern school—that

"The real value of a thing
Is just exactly what 'twill bring."

Now, it occurs to me that, if this simple Hudibrastic test were applied to Bessemer's metallic product, the *true value* of his operation would be more clearly ascertained than by volumes of panegyric. If Mr. Bessemer is of this opinion, he will lose no time in inserting an advertisement in the *Times*, and the *Mining Journal*, *offering for sale* the golden eggs laid by his newly-fledged goose. If it should come to pass that, after advertising the crude metallic excrement of his cupel for 12 months, not so much as a single purchaser shall be found for one ton thereof, it will show—will it not?—that, whatever else he may have done, he has not yet produced a *marketable commodity*.

Whether by telegraph or not, I do not know, but by some means, a couple of lumps of ill-looking stuff reached the out-of-the-world-corner where I reside, and were shown to me by a gentleman of no mean skill and attainment in the science of iron. I need not say that these lumps are the produce of the Bessemerian method, as unmalleable as mortar, and to all appearance *valueless* in the market. Now, if I am wrong in this opinion—an opinion which I see others hold, as well as myself, I shall take it as a favour if Mr. Bessemer will set us right by an advertisement, such as I have hinted at. In the mean time, I put it gravely to Mr. Bessemer, is there a person in all Britain who would give him 5*s.* for 100 tons of his product—except as old iron? Q. C.

Sept. 1.

BESSEMER'S NEW IRON-MAKING PROCESS.

SIR,—It does not follow that because a "Retired Puddler" did not carry his experiments in the refinery further than was sufficient to produce "refiners' metal," consequently Mr. Bessemer's invention must be a "gigantic mare's nest;" neither must your correspondent suppose that he, by dint of his superior wisdom, had proceeded to the end of the chapter.

By a singular coincidence, at the very time that Mr. Bessemer was reading his paper before the British Association, we were, through the means of an accident in a blast-furnace, producing the very malleable metal which he was then describing. It happened as follows:—The lining of the furnace, which was of large firestones, gave way above the tuyeres, and, in a sort of half-fused state, surrounded one of them, so as to prevent a quantity of intervening liquid metal from passing down in the direction of the hearthstone. The metal was thus in its liquid state impounded in a sort of small refinery, or vessel, accidentally constructed by the lining materials of the furnace, and a vigorous hot blast was playing upon it for a considerable time. At length, finding that the furnace refused to perform its work, it was blown out to ascertain the cause, when the state of things above described was discovered.

In attempting to remove this material, we found that around the tuyere we had to contend with a highly malleable metal, which could only be separated from the tuyere, or dealt with in any way by the cold chisel. This circumstance was passed unnoticed at the time, except by the blessings which the furnace men would occasionally bestow on this "infernal tough stuff."

Since reading the letter of a "Retired Puddler," I have endeavoured to search out some of this metal, which was carelessly thrown amongst the scraps to be remelted. This morning we found a piece adhering to the firestone, and, on testing it, we found that at a red heat it yielded to the smith's hammer, and that it possessed the properties of, and was to all intents and purposes, a malleable iron.

Supposing it to be true, as your correspondent so states, that all cast metal does not contain 5 per cent. of carbon, that is a defect which could be easily cured, should such a necessity ever arise in practice, by introducing a small quantity of pulverised charcoal, coke, or pure anthracite coal into the metal as it entered into Mr. Bessemer's "vessel." There can be no earthly doubt that the effect which was produced at the furnace I have alluded to, and that by a simple accident, can, under the control of science, secure all that Mr. Bessemer describes; and, further, that practical results will soon go to prove that it is the stereotyped "Retired Puddler," and not Mr. Mushet, whose mental faculties have arrived at the "floundering," "winking, and nodding," point.—*South Wales, Sept.* 3. GO-AHEAD.

BESSEMER'S IMPROVEMENTS IN IRON MAKING.

TO THE EDITOR OF THE TIMES.

SIR,—The beautifully simple process of Mr. Bessemer in freeing molten iron from extraneous matter is one of those inspirations of genius which only occur at rare intervals, and which are still-born and forgotten, save when the inventor happens to be endowed with a more than ordinary share of perseverance, and a sufficient amount of hoarded capital. Now that the process is before the public its very simplicity makes men marvel more why it was not done earlier than at the successful issue, pregnant as it is with a physical future that will save much "sweat upon man's brow," while working changes of enormous magnitude for his future welfare.

Our manufacturing chemistry is in arrear of our mechanism. Means for the application of power we have in abundance, but our processes for the development of power are still as roundabout as the iron working, which has grown up bit by bit. We dig up the coal which Nature has so abundantly stored in her huge cellars, and we use it as scientifically as the savage who digs up roots and devours them raw, forcing his stomach to become a cook as well as a chemist.

The perceptive faculties of James Nasmyth detected the absurdity of setting a number of human beings to stir up a metallic pudding in order to throw off the scum in the shape of slag and cinder. His remedy was a mechanical one—to cause the mass to boil like a pot, by forcing steam into it from below, the issue of steam beginning before the molten mass was poured in, so as to ensure against the stoppage of the passages. But steam is not exactly fuel, and instead of increasing, tends to lower the temperature of the mass of iron. Mr. Bessemer applied air—the food of fire—which permeated the mass, and in conjunction with the carbon of the iron, intensified the heat and freed the mass from "matter out of place." It was reserved for Mr. Bessemer to work out the process of turning to large practical use a phenomenon known and noticed in many ways by others destitute of the genius to turn it to account. A piece of highly heated iron, held in a strong blast of air, may be burnt away. Even in a still atmosphere the rapid formation of scale is evidence of combustion, and if a piece of highly heated iron be thrown down a vertical shaft it will arrive at the bottom in a state of increased heat. It is merely reversing the condition; the iron travels rapidly through the air, instead of the air travelling through the iron. In Mr. Bessemer's plan the air is made to travel rapidly through the iron.

This improvement is analogous to the processes of paper making, when it ceases to be a mere handicraft, in its ultimate results. The rags go into the paper mill at one end, and come out in miles of paper at the other—a continuous stream; and when the results of Mr. Bessemer's plans lead to their ultimate consequences something similar will ensue in iron.

The ordinary process is to run the iron from the ore in the form of pigs—one heat; then to melt it again and form it into puddle balls—two heats; then to form it into blooms or oblong masses—three heats; then to roll it into common bars—four heats. So far for common iron. For better iron the bars are cut into short lengths, piled on one another, and welded into a mass—five heats; then rolled into bar—six heats. And this process, analogous to that of the baker in rolling out, and beating together, and again rolling out his dough, is sometimes multiplied two or three times for a similar object, to make the mass homogeneous, to get rid of cinder and extraneous matter, with the difference that the flour-kneader works on a cool material, and the iron-kneader on incandescent material—an essential difference to the human frame.

By Mr. Bessemer's process one heat suffices. The ore is run out of the ordinary furnace, not in pigs, but into a refining pot, analogous to the puddling hearth. There the heat is not wasted, but is increased, in the process of burning away the superfluous carbon. The process being complete, the metal is run out—malleable iron—into any form required. When set, the same heat suffices to pass it through the rolls and form it into bars, absolutely homogeneous. The ore may enter at one end of the mill and bars go out at the other.

But now arises a new question. Rolls are cylinders of iron, with grooves cut in them forming the profile of the bar, and during its formation the bar passes through several grooves in succession till the ultimate form is attained. In bars of comparatively small size this is easily accomplished; but the process is a clumsy one. When the bar has passed through one pair of grooves it is caught up by men with pincers, and passed back again over the top of the rolls prior to entering a second groove, and so on. Thus two liftings of the bar are required for every passage through the rolls; time is lost, and sometimes a second heating is required to complete the operation, by reason of the loss of heat in wasted time.

In the ordinary rolls the cylinders are of considerable length, to afford room for the succession of grooves. This practice necessitates a great diameter to insure strength; but if only a single groove were cut in each roll the strength would be comparatively greater. By placing a train of rolls in succession, one before the other, the ingot delivered from Mr. Bessemer's refining furnace might pass on a rail to the first pair of rolls with its original heat, and through them to the next, and so on till the bar were complete, without being touched by hands.

Integral masses of metal, not hitherto dreamt of, may, by this process, be rendered easy of production; and be it remembered that, other things being equal, in all mechanical structures, diminution in the number of parts is a great comparative increase of strength. In wrought-iron artillery, for example, the difficulty has been to obtain homogeneous aggregation of numerous pieces. The welding up of parts in the ordinary modes of making iron is juncture or contact without union, and the famous wrought gun of the American Commodore Stockton, which burst and killed several American notabilities, and the various failures tried at Woolwich and elsewhere, are samples of failure arising from the admixture of oxygenated scale keeping the parts out of union, just as the baker flours his board to keep his dough from adhering. And the success of the Mersey gun, made at great cost, and with great expedition of time, must still be regarded as empirical, till that or a similar one shall have been cut up into transverse and longitudinal slices to verify its internal texture. The metal known as scrap-iron is filled with pores almost like some varieties of wood. Lowmoor and Bowling iron are very homogeneous, but their great cost limits their use. Mr. Bessemer's process gives as homogeneous iron at a cost below that of common iron. A gun may now be cast in malleable iron of any conceivable or moveable weight, and may be passed through rollers, if desired to be fibrous, or may in the act of cooling be increased in density by powerful hydrostatic pressure.

The manufacture of iron bars of good quality has heretofore been a compound process—production, subdivision, and subsequent addition in the form of welding. The question of welding may now be considered as dispensed with in the make of bars, but it enters so largely into subsequent operations that it needs analysis.

Welding consists in a partial fusion of two surfaces of iron, which when brought into contact unite; but to produce this fusion without oxygenated scale is a problem yet to be solved, to make it a certain instead of uncertain process. The affinity of oxygen for heated iron is so great that scale forms instantaneously by contact; but if the surface of the heated iron be hermetically sealed in flame, the oxygen must perforce be consumed before it can penetrate to the iron, and the iron will be preserved unburned, just as the wick of an ordinary tallow candle is preserved unburned by the globe of flame which surrounds it, but which instantly begins to consume when protruded beyond the globe of flame. The economical use of crude fuel in the furnace led to the use of crude fuel in the forge; and, in addition to the want of mechanical convenience, admixtures of sulphur and other extraneous matter have been mischievous impediments in the process.

In producing a welding heat in a forge or furnace, the corners or thin parts are burnt away before the other parts are heated, and in removing from the forge or furnace to place under the hammer, the exposed parts get scaled by the oxygen of the air, even though it is sought to cover them with a glaze of silica by throwing sand on them—a deteriorating material in itself.

The next manipulation of the chemist teaches us the remedy. For his experiments he discards the forge heat of solid and commonly impure fuel, and takes to flame or gaseous combustion, urged by the blowpipe. He can thus direct his heat where he wills, and procure any intensity he may require. That which is done on the small scale can be done on the large; the great welding blowpipe would be simply inflammable gas and atmospheric or oxygenated air under considerable pressure, issuing in jets and uniting in intense flame where the heat might be required, the jets being multiplied to any extent, and covering any amount of surface. The flame covering the surface will prevent scaling, and, the junction being effected without withdrawing the flame, the union will be perfect and homogeneous.

The performance of this mode of welding by carrying the gas and air in flexible pipes to the spot where the work is done, instead of the work being carried to the forge, and the almost unlimited surface which may be heated simultaneously, brings within our scope operations not hitherto practicable. We may weld together the seams and other parts of our iron ships instead of rivetting them. We may thus considerably reduce the quantity of metal, while adding to the strength of the vessel.

The value of the work done by Mr. Bessemer, not for Great Britain only, but for the whole world, cannot at present be estimated. The cheapening of iron, as well as the improvement of its quality, will make it a substitute for timber and brick in buildings. But there is one other process we have yet to get at—so covering its surface as to make it practically imperishable by the agency of oxygen, hermetically sealing it with some substance impregnable to air and moisture.

Great as is the benefaction conferred on the human race by this process, there is a class of men who will be dissatisfied with it. It is the subject of a patent, and probably patents. Suppose it were not so, by what process would Mr. Bessemer be compensated for his labour? The whole race of ironmasters and iron agents would laugh at him, and leave him to the condition of Cort, the inventor of the rolling-mill, and the general public would rejoice in cheap iron. The manufacturer and iron merchant looks only to low cost price as a means of increasing the sale and profits. He does not see that the brain of the man of genius is a working element; he cannot weigh that by the ton, and he calls it monopoly, forgetting, or possibly remembering, that his own monopoly lies in his large capital. But for the hoped reward, the probability is that the inventor would not have been stimulated to exertion, and the world would have been without the invention. How is it that the iron trade, with all their appliances and means, with scarcely any need for outlay in the experiments, in their large works, have left it to Cort and Bessemer to make the great discoveries that constitute epochs? Or will they do any one of the great things that yet remain behind? In truth, the inventor, like the poet, actor, musician, or painter, has a peculiar brain, as much so as the man of business, only more rare in occurrence. The man of business scoffs at him as a "schemer" while unsuccessful—the money test being in his mind the only test of success—and in the event of success he is denounced as a monopolist, till the man of business gets possession of his scheme, and then it becomes a "successful speculation." W. BRIDGES ADAMS.

SIR,—As my name has been more than once alluded to in your columns in connexion with the above interesting invention, with no desire on my part to detract in the least degree from the high merit of Mr. Bessemer, perhaps you will permit me to state the fact that I was the first to originate and carry into successful practice the system on which Mr. Bessemer's process is founded—namely, the passing of a blast of gaseous substance up through the molten crude iron, for the purpose of thereby converting it into the malleable state, and at the same time dispensing with the greater part of manual labour hitherto employed in the ordinary process termed "puddling."

In my process a blast of dry steam is the agent employed, which in its upward passage through the mass of molten crude iron not only effects the requisite agitation, but also, becoming resolved into its constituent elements, the liberated oxygen of the decomposed steam carries off the carbon of the crude iron, while the hydrogen in like manner removes any sulphur or other such impurities that the crude iron contains, and a quantity of malleable iron results of a very superior kind, and that in a much shorter time produced than by the ordinary laborious process.

Mr. Bessemer has with great candour publicly admitted before the members of the

mechanical section of the British Association, at the late meeting at Cheltenham, that it was my process of passing a blast of steam up through the molten crude iron that led him to his admirable process.

As before said, without any desire on my part to detract from his high merit in this matter, I think it only due to myself, and to the establishing a correct history of what promises to be a new era in a most important branch of our manufactures, that the facts above stated should be as well known to the public as they are to those more immediately interested.

JAMES NASMYTH.

Bridgewater Foundry, Patricroft, near Manchester, Aug. 29.

SIR,—In your columns a letter appears from Mr. James Nasmyth, claiming to have been the first to originate and carry into successful practice the system upon which Mr. Bessemer's plan of manufacturing malleable iron is founded, at the same time honourably disclaiming the idea of detracting in th least degree from the high merit of Mr. Bessemer.

Perhaps I may be allowed to give this wonderful discovery a step in advance by stating what I have done practically in relation to the matter.

It was in the year 1843 that I took a patent for blowing furnaces with highly-heated or dry steam, and I used it successfully in a small foundry until 1850.

My object in stating this, is not to make any claim to Mr. Bessemer's process for manufacturing malleable iron, for my plan was for melting only.

It may, however, tend to strengthen the good opinion that is generally entertained of Mr. Bessemer's process that I am enabled to state, from practical experience, that highly-heated steam combined with air may be used advantageously by Mr. Bessemer.

It has been objected that great power will be required to compress the air sufficiently for the blast of Mr. Bessemer's furnace, but I can state that I am now using steam practically at the pressure of 1500 lb. to the square inch, which force is more than sufficient to dispense with the blowing machine altogether, and at no farther cost of fuel than would be necessary to generate the steam.

A. M. PERRIER.

Francis-street, Bloomsbury.

SIR,—Entirely agreeing, as I do, in the opinions expressed in your Journal as to the great importance of this improvement in the metallurgy of iron, there are still some points regarding the quality of the result which, in common with the trade, I should like to see cleared up. It is stated the metal produced is of the same nature as that known under the name of "charcoal" iron, the distinctive property of which is its freedom from sulphur, phosphorus, silicium, &c. Further from the fusibility of the metal (which is only just fusible, when pure, at the highest temperatures) and the steely character which Mr. Bessemer says it often assumes, it does not appear quite certain that it is free from carbon, or, in other words, that it is not a species of steel.

These points may at once be cleared up by the direct chemical analysis of the samples of metal produced, and it must be as much for the interest of the inventor himself as of the trade and of the public that such analysis should be made known.

In my opinion, much metal that is sold as iron, particularly "red short" metal, is, in fact, steel—a kind of steel. The more "red short" iron is worked the better it becomes, (I believe) by the burning away of the excess of carbon, and so long as it has this excess it works under the hammer exactly like steel. In this respect, then, Mr. Bessemer's metal would not be so bad, at any rate, as a large quantity of the bar-iron now made, while the great saving in labour, and, above all, in the constitutional wear and tear of the poor operative, is a vast gain. But as to metal quite free from carbon, even if it could be produced* (which I doubt), I do not think it would be desirable; for as a film of protoxide would be formed upon its surface when red hot, it would weld with difficulty, and be liable to fracture afterwards. Blacksmiths will tell you that a charcoal fire "feeds" the iron, and makes it work kindly—*i. e.*, by partially carburising the surfaces, and so preventing oxidation.

In Mr. Bessemer's paper, read to the chemical section at the late meeting of the British Association, allusion was made to the reduction of the rich cinders by the carbonaceous gases, and Mr. Worsley read a paper by Dr. Ourlt, in which the latter claimed as his invention the use of carburetted hydrogen gas in the reduction of the rich ores of iron. In justice to the real inventor of this elegant process, and to prevent litigation, it should be stated that it has been secured by patent for the last four years, and will shortly come into extensive operation when the inventor has completed his process for the cheaper production of such gases.

TUBAL CAIN.

SIR,—James Nasmyth claims very justly to be the first recorded applicant of vaporous substances, in the form of steam, to pass through molten iron, such steam being formed either before entering the iron, or after entering the iron in the form of water. The latter process, I apprehend, has not been tried; the former has not been successful,—probably because steam is not fuel, and to "resolve it into its elements" to make it fuel abstracts too much heat from the molten metal. The heat lessens, instead of increasing, as in the method of Mr. Bessemer, by injecting atmospheric fuel. There is another difference between the processes. Mr. Nasmyth simply changes the solid stirring-rod of the puddler into a hollow rod, through which the steam passes, worked, as usual, by manual labour. Mr. Bessemer has accomplished the task of holding a mass of molten iron in a clay colander while injecting air from below, solving a problem much more difficult than that of the pitchers of the Danaides. Mr. Nasmyth sought, but Mr. Bessemer found, what was not to be had in Mr. Nasmyth's peculiar hunting ground—steam; and no one can with more grace than Mr. Nasmyth lay his hand on his bosom and say, "Even I am but a man. Astronomer, artist, and mechanist, I still do not add chemistry to the list of my various accomplishments."

Mr. Bessemer's process engenders an enormous increase of heat, at present not applied usefully, but wasted, and the problem has yet to be solved how far this heat can be applied to reduce ores in the blast furnace. It would be a curious result to find that the heat taken originally from the blast furnace, and increased in the refining furnace, could be given back to another blast furnace, to return more heated metal to the refining furnace, the consumption of fuel being confined to the blowing engine, or dispensed with by water-power. It may be that ultimately the whole process will be performed in one furnace, incessantly filling and discharging, air passages being provided both above and below the molten metal. The solution is commenced of the vast problem alluded to by Dr. Daubeny for the production of artificial heat without the process of coal digging; and the indication of Mr. Bessemer will lead to cognate chemical researches in glass making, pottery, general metallurgy, steam-power, and all those large processes hitherto very remarkable, by the imperfect combustion of the crude fuel, and it is by the chemist and not by the magistrate that London and other large cities may ultimately be freed from smoke. It is evident that henceforth iron of as good quality may be made in Wales or Staffordshire or elsewhere as in Yorkshire, and the difference of price, from 3*l.* to 18*l.*, equalised. Pure iron is like pure gold, *sui generis*, and now that the process is discovered of easy and certain purification from extraneous matter the only difference in cost will be, not in the quality, but quantity of metal which can be extracted from the different classes of ore, and in the cost of human labour for getting the ore, together with the royalty of proprietorship. Fortunately, we do not find metallic iron, like Michigan copper, in masses, or it would puzzle us to turn it to account. The oxygen, sulphur, and other ingredients that render it impure make it also friable, and capable of extraction, and the simple mode of purification being attained, the rich ores of Cumberland, the red hematite, impregnated strongly with sulphur, and hitherto only capable of making "red-short" iron, now become tractable, and will probably be among the most valuable.

Out of this discovery of Mr. Bessemer we shall get, among other things, railway bars of homogeneous quality, and as hard in texture as may be consistent with the absence of brittleness. We shall not have the surface rent into stringy fibres, like birch brooms, nor squeezed out in patches, like iron dough. With moderate weights in the driving and other wheels, and possibly improved structure of the machines, railway shareholders will yet get in possession of that long-desired property, a "permanent way," permanent in fact as well as in name; and it may yet become possible for people to travel on rails for days and for weeks together with no more injury to health than is experienced in a sailing vessel,—a conclusion which medical experience tells us is not yet attained, even in a daily return journey between London and Brighton.

The talents and faculties that will be stimulated to profitable exercise by this stirring fact in the history of iron give us the warranty of an opening future, in which the sweat of the brain within the brows will be the true reading of man's destiny, which has hitherto been translated literally. It sets the pulses aglow at the thought that men's muscles will finally be freed from wasting drudgery, and only used in healthy exercise.

W. BRIDGES ADAMS.

TREATMENT OF GOLD QUARTZ, &c.

SIR,—Your columns have lately teemed with communications on this (already overwritten) subject. Opinions have been ventured by the theorist and practical on the matter so varied, that the only wonder is your patience had not been long ago exhausted; but I cannot help in all this deviating a little from the course I condemn, and send a few more remarks to you, believing that your well-known courtesy will give them to the wide world.

We have had, Sir, opinions as numerous and as crude on gold treatment as could be furnished from the pens of the most fertile in imagery. Mechanical appliances without end; chemical experiments—very interesting ones, too; electricity has lent its wonders; solution (chemical, I suppose), and a number of other terms, have been either coined or used to illustrate the subject. Gold mines have been found, on which nearly all these plans have been tried, their owners hoping to get gold by the "ton," as promised by all these new processes. But, alas! Sir, "how has the fine gold become dim," and to this hour not a single dividend has reached us from the teeming "placers" of California, Australia, or all the other gold mines put together, where any one of the new modes of getting (*i. e.*, losing) gold has been tried.

Now, Sir, the ordinary crushing and stamping machinery has not proved so unfortunate, for at mines of gold where such has for many years been applied, with suitable washing or dressing apparatus, in some instances very satisfactory dividends have been made and paid for a series of years, and are likely to be continued. Gold mining, to be profitable, must be soundly and honestly conducted. A system of efficient mining, crushing, stamping, and washing, are the four grand points on which hinges the success of the associations. It is necessary that the mineral veins or alluvial deposits be capable of yielding a sufficient quantity of matrix to operate upon; then that the crushing and stamping machinery be capable of reducing to a powder of infinite fineness very large quantities of the quartz, or any other kind of matrix in which the gold occurs. Experience teaches us that, to obtain nearly all the gold, the stamping must be repeated over and over again, until a degree of pulverisation is arrived at, so as to assure the operator that nothing further can be obtained. The washing of the resultant slimes next engages his attention and anxiety. The blanket and the raw hide "set well their parts," with a number of other useful appliances, until the bulk is so reduced, that an expert hand-washer can very readily obtain the "yellow dust." Such, Sir, is a rough outline of gold mining operations in stern reality. I have for many years been concerned in these operations, and would rejoice to learn that some method had been discovered to cheapen the obtaining of all the gold from its matrix. The "new plans" fail to do this. I have tried to make myself acquainted with most of them, and find them to be, as a whole, utterly useless, as the expense is increased, entailing unsatisfactory results of product, and unfitted to treat large quantities of rough matter. There is, I think, more genuine skill exercised in gold reduction by a poor native miner of South America than is shown by the legion of inventors of the so-called new reduction machinery for gold. In one of the most productive gold mines of South America the metal is so finely disseminated, that it commonly takes 300 of these filmy flakes of gold to weigh one troy grain; it requires, therefore, no little care and skill to pulverise and wash such minute matter, yet it is done profitably. The use of mercury to amalgamate gold should be avoided as much as possible, as it is a more expensive mode of treatment than that of washing, and in most cases entails a great loss of mercury: of course, where gold is found in a state of combination with silver, amalgamation then becomes necessary, or the silver is lost. Almost every gold mine that I have been concerned in requires some local variation of treatment, arising from differences of the composition of its matrix. The details of washing are as complicated and numerous as to puzzle almost any one, yet every intricacy serves a useful purpose in collecting and cleansing the precious metal. Very many improvements of gold washing details have been introduced by the steady and thoughtful workman, and I live in hopes that such a deserving class will yet add many other improvements in these departments, on whose honest brows the honour of inventors will sit more gracefully and deservingly than on the host of charlatans, from Berdan's bubble to the present time, who have claimed the golden apples in vain.

London, Sept. 1. W. B.

* I have never met with a specimen of bar-iron which, after solution in an acid, did not leave a palpable residue of carbon.

SEPARATION OF METALLIC MATTERS FROM THEIR SULPHATES.

SIR,—As your valuable Journal is always open to correspondence on topics of interest to the mining world, I now, with reference to my letter which you published on Aug. 23, desire to submit the following further observations, should you deem them worthy of notice, on the subject of reducing matrix ores for the extraction of the precious and other metals.

It is notorious, from the efforts for this object we witness on every hand, that great anxiety exists on the part of owners of mining property with lodes possessing auriferous and argentiferous admixtures, to discover some simple and economical means of extracting those metals, which, up to the present hour, and after enormous outlays in machinery and its costly concomitants, have evidently not yet been attained, the results of such attempts having proved mostly insignificant, and none so profitable as to recommend their adoption. And why is this? It is, in my view, to be accounted for mainly by the want of due consideration, and, in truth, of experimental knowledge, regarding the chemical properties and affinities of the substances submitted to such treatment. I trust, however, that mechanicians have at length seen the folly, under so many failures, of prematurely displaying their abortive schemes to the public gaze, and that they will in future desist from like exposures until counsel has been taken of chemical science in relation to these matters—I mean of real working chemists, who can operate on tons, and not pounds weight merely. It is beyond doubting that experiments on a diminutive scale, upon the principle of reduction hitherto adopted, can never surely indicate the result of operations to an extent of any magnitude. I am well agreed with your able and practical correspondent, Mr. Evan Hopkins, that the reduction of some 50 or 100 tons of quartz, and the extraction of their metallic contents, should be considered a triumph; but unless this be done, and it can be shown that a decided profit is obtained on such working, all costs and charges being, there is no room for boasting; and any attempt with minor quantities will prove but a vain repetition of what has gone before—a waste of capital, time, and labour.

The Chancellorsville Mine directors, on whose statements I formerly commented, should have taken my advice six months ago, when Messrs. Symonds and Fell offered, on liberal terms, the use of their premises for a reduction, by my process, of some hundreds of tons of that company's quartz, which I was prepared to effect at a premium of 25 per cent. on the nett out-turn, which would be comparatively a light charge on an operation, in itself simple and inexpensive, by which large profit, if the samples I tried were of average quality, should have been yielded upon their ore. For that process I have since obtained protection by letters patent, which will, of course, be soon a matter of publicity. The issues of the surely unadvised and needlessly expensive course the company—or, perhaps I should rather say, the directors—seem now bent on pursuing, to obtain the worth of their doubtless real and extensive property, time alone can fully show. In the meanwhile I, for one, regard with pity the evidence of such valuable property being thus inconsiderately trifled with, to say nothing of the loss entailed upon proprietors. But perhaps there is no accounting for these extraordinary freaks of the human mind. They appear to me to amount to positive infatuation—as if North Wales, and its excessive expenditure, were being acted over again, with the aggravation, too, of bringing the quartz 4000 miles to be operated upon by a system which has already proved itself ineffective. This, however, Mr. Editor, is a game which must soon be played out; and I think I may add, without presumption, that I am about to introduce a system, exclusively my own, which, after a series of most satisfactory experiments, I firmly believe will establish itself as the true desideratum for the solution of this very tedious and harrassing enquiry—viz., whether the smaller particles of the precious metals contained in quartz or matrix can be extracted and made available to the proprietor.

In conclusion, I will just state that the object of my patent is to cause an entire separation of the metallic matters from their sulphates, commonly termed pyrites or mundic, without submission to fire-heat; and so perfectly by this process are the metals divested of extraneous matter, that they remain in deposit in a state fit for reduction by smelting or amalgam, without any loss of the precious metal; and this, supposing always the presence of such metal in the ores, is done at a merely nominal cost, contemplating the amount of return which may be looked for on the whole operation.—*King's Mead-cottages, New North-road, Sept.* 4. P. A. GOBERROY.

TREATMENT OF AURIFEROUS MINERALS, &c.

SIR,—Inundated, if not nearly smothered, with replies to, corrections of, and animadversions upon, my attempt to collate the principal facts necessary to guide us in forming not only a true estimate of the requirements of this vexed question, but also to correct our manipulations herein, I take up the task of answering the assailants of my CANON OF CRITICISM.

And, first, of Mr. Wm. Reay, jun. The exordium anent Mr. Bessemer's discovery is all *bosh*, since there is nothing but *emptiness* in the whole tale, respecting which it may be said that "what of it is true is not new, and what of it is new is not true"—Messrs. Mushet, Hopkins, and others, notwithstanding. If any of these gentlemen who boast of their intimacy with the manipulations and genius of the iron manufacture will tell us (and prove it) what is the cause and nature of the "bull" upon bars of cemented iron, I shall acquit them of truth in some of their assertions.

Mr. Charles Sanderson's view of the subject has my entire and unqualified support, and with the letter of "Retired Puddler" I have little fault to find.

With regard to Mr. Reay's comment upon Article 5 of my Canon, if he will take the trouble to shake mercury with water in a phial for some minutes consecutively, he will see, on placing the bottle in a state of rest, that the mercury is disintegrated—that large globules are at the bottom, which coalesce with greatest rapidity—smaller globules above, which run into one another very slowly, and uppermost a stratum of a greyish colour, without metallic lustre, the particles of which require hours for their mergence into the general mass of mercury. Does not this prove that the particles of mercury become varnished with water, and that if they coalesce slowly with each other, they will also come into actual contact with auriferous particles in an equally imperfect manner? But I could multiply instances in other directions. Hence Art. 5 must stand as it does.

As to Art. 6, his remarks are equally inapposite, because at the temperature of 620° Fah. in iron and 660° Fah. in glass mercury enters into full ebullition; whilst at 500° Fah. protoxide of mercury begins to suffer reduction, and at even lower temperatures (as daguerreotypists find by practice) mercury exhales palpable vapour! Now, from this, and as mercury is one of the metals that suffer reduction from oxide without adventitious matters, it follows that Art. 7 is also true. Mr. Reay will please to understand that I do not pretend to act upon minerals containing gold with sulphur, &c., by mercury, for the separation of the gold, until all mineralising matters have been previously removed; nor do I intend to make "slimes," and hence these critical remarks of his are uncalled for. I must object to the omission of the word *economy* from No. 13, the failure of all other machines acting singly, and the greater efficiency of my own, which is duplex, without amalgamation during grinding, constituting my best proofs.

As to the comment upon Art. 15, the operation of my "Gyro-stamper" will enable the larger gold to be removed ere subjecting the residual vehicle to the action of my grinder-proper.

Of the truth of Art. 18, many proofs might be given from chemical data, and the auriferous incrustation of the roots of living trees which have been found and preserved either attest this fact, or that gold exists mineralised and in solution, or both.

Thanking Mr. Reay for his remarks generally, I pass on to the other anonymous, "Cyanogen." Has this hide-and-go-seek gentleman so much yellow (the colour of old age) in his composition, converting his *blue to green*, that he cannot see that, besides having their otherwise *passive powers exalted by heat into reactive ones*, oxide of copper is in a state of fine division, more or less, whilst sulphate of copper will be actually in a state of igneous fluidity by the heat of roasting.

All the rest of his examples under this head are equally futile, and answerable in the same way, and evince that "Cyanogen" *may be a chemical compound, but no chemist.*

As to his observations upon Art. 4, the manufacture of *blue pill* by pharmacians contests them for me successfully; did not a host of other facts do so. Ditto, No. 6.

As to those upon Art. 19, gold exists in sea water both as an iodide and as a bromide, and it is, generally speaking, the easily decomposable nature of mineral forms of gold that frustrates our recognition of them in the ordinary processes of the arts. But in my experiments lately, I find that, without reducing the quartz finer, mercury will take up (by my mode of operation) 98-100ths of the *free gold*; but if I *fuse* an average sample of the same quartz with *liver of sulphur*, and then treat the *residual* for the gold, instead of 98-100ths I get 134-100ths, and if I act upon the quartz sand (after edulcoration) by fluorine, I get an additional 13 to 14-100ths. If gold does not occur in a mineralised form, how are these anomalies to be explained?

With regard to his strictures on No. 20, the ter-sulphide of gold is *very* volatile, and the reason why makers of iodine and bromine never find gold in their products is the extreme volatility of the iodine and bromine of gold.

As to Dr. Collyer's letter on this subject; as he has not replied categorically to the articles in the CANON, I refrain making any remarks, leaving him to the fruits of his own knowledge, whatever it may be, and reminding him, and the reader generally, that a pertinacious adherence to old and obsolete ideas, to the exclusion of all new and more enlightened views, can have no other end but one—*i. e.*, signal failure.

In corroboration of this truism, I will state that a digger from Ballarat is just arrived in London, to find out the best quartz-crushing machine, or rather a better one than either Collyer's, Berdan's, or Perkes's, all of which (he says) have proved complete failures in Australia, and can be bought for old metal. He says he will return to crush the quartz reefs, if he can meet with a machine that will effect the purpose, but else he shall not return.—*Sept.* 1. WM. RADLEY, Ch. E.

ON THE SUBTERRANEAN ENGINEERING OF LONDON.

SIR,—This is a subject fraught with importance to the present generation, but it will be of greater consequence to the future inhabitants of the metropolis, as if we commit errors now, while we are about to commence such great works as the metropolitan railway and the drainage of London, they will have to re-arrange, and again do, at a great cost and inconvenience, what might be so well done at first as to render any future alterations unnecessary—at least, for a long time to come.

In the first place, I will take it for granted that it is an axiom with our engineers that we can drive fluids, such as air or water, into, or withdraw them *from*, almost any place in the present day by the aid of machinery, and in any quantity.

In the next place, I will state it as a fact, that a tunnel of 7 feet diameter, with a fall of 1 in 700, would take about 50 millions of gallons of water 48 miles in 24 hours.

And, in the third place, I will affirm that four good pumping-engines, of 100-inch cylinder, would pump the same amount of liquid 360 ft. high in the same time.

If these statements are correct, and I believe they are sufficiently so for all practical engineering purposes, it will be evident that the London sewage may be carried in what direction we please; and I ask, is it not a mistake, and is not contrary to a proper understanding of the laws of Nature, to carry it down the Thames and throw it into the sea, when, by carrying it to the tops of the hills, it might be made to fertilise their sides and all the plains below? The soil would get its aliment from it, and it would raise corn and food for those 2,800,000 people who are now exhausting the surrounding country for their support; thereby imitating the action of Nature that produces all her great results by a sort of circulation, as has been shown to be the case with the blood in the human system, and was beautifully illustrated by Mr. Hunt recently, when he stated it was now proved that the sunlight was stored in the timber of the primitive forests of this planet, which, by subsequent processes, was converted into coals, and is now re-produced as gas to lighten our streets at nights, and our tunnels in the crust of the earth. We should, by taking this sewage to the tops of some of the highest neighbouring mountains, be restoring the other half of the circulation which is the providing of food for the people, instead of destroying it, as we now do by making it non-productive; and if we go into the neighbourhood of Welsh Pool and Shrewsbury, we shall see this very principle in practical operation. A Mr. Naylor is there building his manure tanks at the summit of the highest ground on his different farms, forcing up the liquid manure by means of steam-engines, and fertilising his and by it to such a degree as, I understand, cannot be done by any other mode. Then why not follow the same process on the hills about London? I would take the centre of London as the focus and highest point of the system of tunnelling, and let the tunnels radiate to the suburbs, beginning with a depth sufficiently low (say 120 ft.) to allow of all tunnels for locomotion above; the tunnels falling as they go outward.

I think I have said enough to show the principle I would follow; but while on the subject, I would say I believe that the general system of subterranean work of London is too shallow. There is no good reason why it should not be deeper, and it would secure many advantages, such, for instance, as not interfering with the present sewers and cellars. It would afford great room and convenience below the present sphere of operations. For railways, people might be let down and up on ascending and descending platforms, which would require little room at the surface, and below, waiting rooms and offices might be ornamented and lighted to any extent; for example, a tunnel of 25 ft. diameter would give a room of 20 ft. wide, and 20 ft. high, with 5 ft. below for ventilation, &c.; and as it is now generally supposed that if Brunel had taken his tunnel 60 ft. lower he would not have suffered from the influx of the Thames. By taking a proper depth, as in all probability the strata would be sufficiently compressed and indurated, the railways might be taken across under the river at (say) Hungerford Market and London Bridge, and to a great extent solve the difficulties now experienced from want both of sufficient bridges and thoroughfares. I would also say that I believe by having smoke tunnels and air tunnels the whole of the London smoke might be carried to the highest surrounding hills,—all chimneys in town being done away with—and there be delivered by high stacks into strata of the atmosphere, whence it could return to do no harm. The fires would be fed by currents of air driven through these tunnels, and the smoke be drawn off by currents passing through the smoke tunnels, thus the beautiful Thames would be restored to its pristine purity, and London would assume the look of an Italian city, as far as an English climate would admit of it.—*Heddfa Gerog, Rhayader, Sept.* 1. MATTHEW FRANCIS.

P.S.—Probably smoke tunnels alone, with adequate power of exhaustion, would be sufficient, and all such tunnelling as I have alluded to might be done cheaply and expeditiously by the aid of portable engines—except the railway tunnels, which would cost in proportion to the size; the sewage tunnels would cost comparatively little.

THE DREADFUL EXPLOSION IN SOUTH WALES—ONE HUNDRED AND FOURTEEN LIVES LOST.

TO THE RIGHT HONOURABLE SIR GEORGE GREY, HOME SECRETARY.

SIR GEORGE,—The late heartrending colliery explosion in Wales, by which 114 human beings perished almost instantly, and which has resulted very properly in a verdict of manslaughter against all parties concerned, is my apology for once more calling your attention to this melancholy subject.

Sir George will find, on reference to my letter of June 19, 1849, even before the first Colliery Act had any existence, I then pointed out to him in the said letter, in a clear descriptive manner, the sure method of preventing colliery explosions, a method which the Government Inspectors approve, and declare in evidence in the Wales enquiry would have prevented, had it been in operation, the late melancholy accident. I refer to the method of splitting the air into separate and distinct windings. I beg again to repeat what I have so often brought before you. Sir George, and parliamentary committees—viz., that these fearful colliery explosions cannot, and never will, be prevented if the method I then and now advise be not carried into operation in the coal mines of this country.

I frankly admit that a great number of recommendations to prevent colliery accidents have again and again been pressed upon Sir George, and parliamentary committees, by well-meaning theorists; but Sir George may depend upon this great fact, founded alike on reason and science, and which I know from practical experience in coal mining, that the only preventive of terrible accidents by explosions in coal mines is plenty of air, and properly distributed, in separate distinct winds, into every part of a mine: or, in other words, for Sir George to see upon the face of every inspector's report hereafter sent to him, that the first general rule in the present colliery Act is fully carried out in every coal mine throughout England and Wales, and then, so sure as we have an adequate amount of ventilation in mines to render harmless noxious gases, even so sure shall we have an end of these calamitous colliery explosions.

I remain, Sir George, your obedient faithful servant,

Rothwell, Aug. 27. THOMAS STEPHENSON.

THE COPPER TRADE.

SIR,—Are the miners injured by the smelters' monopoly? and would the price of ores range so high as it has done without the association? I think not. We all know, or ought to know, what a monopoly price means: it is when commodities are at the highest which consumers are willing or able to buy them, when, in fact, competition is on one side only—amongst the buyers. Have not the miners, then, enjoyed to a certain extent a participation in these high prices? Not to such an extent perhaps, as they think they are entitled to, but no one can deny a joint participation. On whom, then, does the evil fall (for an evil it is, and a most crying one), but on the consumers and public generally?

Where prices fall in proportion as sellers augment the quantity, and rise in proportion to the eagerness of buyers to purchase, having, in truth, no connection whatever, as they should have, with the natural value of the commodity itself, it then becomes a general, not an isolated, evil—a plague spot: and, what is most revolting and odious to the feelings of Englishmen, a combination for exclusive advantage—grasping by a few of what Nature intended for the common use and benefit of all. In a word—monopoly.—*Sept.* 1. A LONDON CONSUMER.

MINING IN JAMAICA.

SIR,—As you are pleased to state, "the mineral wealth of this colony is attracting some attention, and that you are desirous of obtaining information on the subject, permit me to state, that having for years past formed a very high opinion of the manganiferous formation of a considerable portion of this island, not alone from the historians who have recorded their opinions that such is the case, but from personal observation, having been intimately connected with mining companies, and holding such positions therein many years ago, that I considered it no less my duty than interest to make myself as conversant with the subject as circumstances would permit, and having been called upon by the late President of the Jamaica Society, established for the Encouragement of Arts and Sciences, &c., in the colony, to lecture upon the subject, it became imperative, and being an admirer of science, I have followed up "The Mineral Resources and Mining Capabilities of Jamaica;" and the more I do so, the more impressed I am with its importance, increasing daily the longer I study it, and have arrived at the conclusion, from an immense number of facts, "that no part of the world can abound more with such productions as copper ores." I make use of the quotation of Dr. Patrick Brown, in his *History of Jamaica*, in 1756, after enumerating fourteen varieties, or of a richer quality, I may add, unless the Lake Superior or the Chilian ores, and fully equal to some of the latter shown at the late local exhibition, now the Museum of the Royal Society of Arts of Jamaica, which may be seen copper ores from ten parishes out of twenty-two, of which this island consists, collected by myself, exclusive of others even surpassing mine in size, &c., and from Orange Brook, in the parish of St. John, I have displayed specimens, most of which taken out by myself, in juxta-position with some of the richest cabinet specimens from Cuba, and the most competent judges have pronounced that they appear as taken from one mine, the native copper excluded.

This property is situated about a mile or so in a direct line from Charing Cross Mine, from which I send you the last report published, and I think you will agree with me that it looks very much like a mine in reality, when they are taking out from one stope, so near the surface, 15 cwts. to 1 ton of ore per fm.; another stope, from 12 to 15 cwts. of ore per fathom; a winze from 5 to 10 cwts. of ore per fathom, and another portion of a level from 15 cwts. to a ton per fm. This requires no comment for me, beyond stating that if this is not proving a rich mine, at such a moderate depth, I am mistaken, and from the nature of the ore and matrix, with crystalline quartz combined, and which I have tested, I think there can be little doubt of it continuing and increasing in depth.

I would refer you to an article, also, in the *Standard* of Aug. 1, which I fully agree with. Most of the mines alluded to therein I have visited recently, and can endorse much that has been stated, however highly coloured some may appear, and you will perceive that I have not over coloured the Smith's Mine, Orange Brook, which the Editor states, "in a year or two will be second to none in the world," my own opinion is, they only require means to prove it.

I hope to see much realised yet, although so long a period has been allowed to transpire, and so much wealth lie dormant that might tend to restore the fallen fortunes of many around us, and I confidently hope will remunerate all who have embarked in fair legitimate mining.—*Kingston, Jamaica, Aug.* 9. E. C. LEWIS.

THE BELEN AND FORT BOWEN MINES.

SIR,—The following extracts from the fourth voyage of Christopher Columbus will give your readers some idea of the extraordinary riches of this part of the world. I have repeatedly tested the ore from these mines, and it fully confirms the Spanish account. In fine, some of these mines have been worked for about 250 years, and paid to the king of Spain, for 3 per cent. royalty, above 10,000*l.* a year. This was interrupted by the Bolivian revolution:—

"In the early part of November, 1502, Christopher Columbus first visited the coast of Veragua, where he found the natives with large plates of gold hung about their necks by cotton cords. They had also ornaments, rudely shaped, like eagles. One of them exchanged a plate of gold worth 10 ducats for three hawk's bells. Seeing the great value which the strangers set on this metal, they assured them that it was to be found in abundance within the distance of two days' journey, and mentioned various places along the coast, particularly in the vicinity of Veragua."—"The cupidity of the Spaniards was greatly excited by the sight of the gold, which was so plentiful among the Indians. They would gladly have remained to barter, but the admiral (Columbus) discouraged all disposition of the kind. He barely sought to obtain information of the riches of the country."—"He, therefore, commenced exploring the coast of Veragua, and being arrived at the mouth of a large river, on the boats being sent to land, were met by about 200 Indians, who appeared on the shore, armed with clubs, lances, and swords of palm wood. The forests echoed with the sounds of wooden drums, and the blast of conch shells—their usual war signals. They rushed into the sea up to their waists, brandishing their weapons and splashing the water at the Spaniards, in token of defiance. They were, however, soon pacified, by gentle signs, and by the intervention of the interpreters, who had been secured farther down the coast, and willingly exchanged their ornaments with the Spaniards, giving seventeen plates of gold, worth 150 ducats, for a few toys."

On the boats landing, they were kindly received by the Cicaque, or king. He was naked, like his subjects, nor was he distinguished from them, except by the great deference with which he was treated, and the attention to his personal comfort—holding, for instance, a large leaf over his majesty when it rained. "He had a large plate of gold, which he readily gave in exchange for a trifle, and permitted his people to do the same. Nineteen plates of pure gold were procured at this place. Here, for the first time in the New World, the Spaniards met with signs of solid architecture, finding a great mass of stucco, formed of stone and lime. He had intended to visit other mines along the coast, but the wind coming on to blow freshly, he ran before it, passing in sight of fine towns, where the interpreters assured him he might procure great quantities of gold. One they pointed out as Veragua, which has since given its name to the whole province. Here, they said, were the richest mines, and here most of the plates of gold were fabricated."

"On December 5, 1502, he again revisited these parts, after an absence of about one month to Darien, Porto Bello, &c., where he found no gold. He, therefore, again came westward to the gold mines of Veragua, but, from adverse winds did not reach there until the day of Epiphany, and to their great joy, reached the mouth of a river, called by the natives Yebras, and said to be very rich in gold mines. At this river Columbus gave the name of Belen, or Bethlehem."

"Columbus ordered the mouths of the Belen and Veragua to be sounded. The latter, however, was found too shallow to admit of his vessels, but the Belen being deep, it was thought they might enter in safety, which they did.

The various accounts of the riches of these parts appeared to be confirmed by what they saw and heard among the people. They procured, in exchange for the veriest trifles, twenty plates of gold, with several pipes of the same metal, and crude mass

of the ore. The Indians said that the mines were in the mountains. In fact, the whole soil appeared to be impregnated with gold. Columbus said, that after an absence of a few days of his brother, he returned with great quantities of gold, and with the most animated accounts of the country. He had found no part equal to the palm, and no where to be found such quantities of gold as in this district.

The country produces excellent fruits, among which are bananas, plantains, pineapples, and cocoas; there also was Indian corn in abundance. The rivers and coasts abound in fish of every description."

In the time of the Indian kings the surface of the Belen Mine was worked, and the old implements, in stone, were found by me. They consisted of large almond-shaped stones, pierced with two holes, in which were inserted handles: this pestle was worked backwards and forwards, in a wide mortar, cut out of a large piece of granite. Several of these have been found in the immediate vicinity, showing that the place was known to be rich in gold long prior to the visit of Columbus. It can be well imagined how rudely and inefficiently these localities have been developed, when the Spaniards were content with the surface produce; in fact, the whole of this country remains undeveloped.

Until the Fort Bowen, no regular mining company has been established since the time of the Spaniards, who were forced to leave the country during the revolution under Bolivar. Had the Fort Bowen Company conducted their affairs with the most distant regard to skill or economy, I feel certain the 25s. shares at this moment would be worth 25*l.*, instead of which they are at 2s. 6d.! No wonder: some 60,000*l.* have been spent in vain, thrown away.

Mr. Tournier and myself will not outlay 2000*l.*; and if we are not in a more effective state in every respect I am more mistaken than I ever was before in my life. For that sum we will reduce more ore, extract more than double the amount of gold, and at a reduced expenditure—which will astonish our London directors.

Energy, economy, and skill, are the conditions essential to success; without them, failure must ensue.—3, *Park-road, Regent's-park.* R. H. COLLYER, M.D.

MINING IN SPAIN.

SIR,—Are your readers, and the mining interests of this country, sufficiently aware of the mineral resources of the North of Spain? It is no uncommon thing there for the country people, in the wintor time, or when they are out of work, to dig away on their own account at the veins of copper and lead which crop out on the sides of the mountains, and to take the ore down into the towns, and sell it to French and English merchants, or to Belgians, who travel about there to buy it. I myself saw, in the neighbourhood of one of the largest seaports, a lead mine where the lode was a foot across, and worth 70 per cent. It appeared to me quite pure lead, but I was told that that was the average of the quantity of metal it contained. The mountain was intersected by several veins of a similar nature, with galleries left where the Romans had worked in bygone times. This, in these countries, is looked upon as a sure sign of the wealth of the mine; yet here, when I saw it, although it was professedly being worked by a company of Spanish merchants, there were only 12 men at work on the premises (there had never been more), and that in the rudest manner, and with the most inefficient appliances conceivable. So rude is the system of mining out there, that whenever they meet with the water, and the lode dips, they are stopped for the want of machinery. Surely, there is a good field for English enterprise and capital in that district.—*Sept.* 4. AN ENGLISH TRAVELLER.

THE SUBMERSION OF THE SOUTH TAMAR MINE.

SIR,—Last Monday, a telegraphic message was received at the offices of the South Tamar Mining Company, announcing that the "mine was drowned" by the breaking in of the Tamar river, and filling the mine with water. This lamentable occurrence is one of considerable importance to the mining interest generally, and requires the strictest investigation as to the *real*, not *hypothetical*, cause of the accident. Although this melancholy event happened on Sunday, when there were no men underground, and, consequently, no lives sacrificed, yet I consider that this gratifying circumstance should not deter an official or even Government enquiry.

Collieries are under the supervision of Government inspectors, to prevent as much as possible the loss of human life, whilst mines are wholly excluded from that paternal care. I will admit that mines are not liable to the explosions and accidents which so frequently occur in the extensive and horizontal workings of collieries, but when an accident of such an alarming character as this comes before us, the strictest and most impartial public investigation should take place. This event leads me to consider one or two important matters in connection with mining, and London mining affairs, generally. I may venture to assert that there is not an office in the whole metropolis where a correct working plan of any mine is kept. We have a committee (paid or unpaid) of management, who attend occasionally to see the periodical reports, sign cheques, &c., with probably a well-drawn surface plan of the respective mines they are engaged in, hanging on the office wall, but not one of those sapient mine committeemen can show you any point at which they are working. I do consider that there exists a vast amount of neglect or omission in not every month having the extent of ground expended marked upon the working plan. The secretaries of companies are generally well paid men (exclusive of their share jobbing propensities), and I should think that, as they have every month's cost-sheet placed before them, the extent of ground driven, sunk, or taken away, every fathom and inch to be paid for, if it be not beyond their capacity, such driving, &c., should be marked or measured upon the working plan in the office, to correspond with that in the counting-house on the mine, when each individual shareholder would perceive, as well as the manager himself, whether they were approaching too near danger, or getting out of their boundaries. This, Mr. Editor, is one of the imperative duties I would enforce in every office.

I have known of serious accidents happening, by which an awful loss of human life has followed. East Wheal Rose suffered from the bursting of a waterspout, and a large number of men were drowned, but this was an event that no human foresight or care could have prevented. Ward Mine, on the same river (Tamar), experienced a similar fate some years since, when four or five men lost their lives. Ultimately the fracture was stopped, and the water forked, the bodies recovered, an inquest held, "accidental death" returned, and there ended the tragedy. No official enquiry took place, so as to prevent a recurrence; therefore, we may go on in the same course, until a more awful sacrifice of life takes place; then the cry will be, "Who would have thought it?"

I have been informed, Sir, that there have been symptoms to apprehend danger; how far this may be correct, probably the miners working in their respective places under the river can afford the best evidence that can be obtained, to arrive at anything like correct information. On the mine, therefore, let an official enquiry be made, so that the public, as well as the shareholders generally, may become fully acquainted with "the truth, the whole truth, and nothing but the truth."

Mr. Editor, the other circumstance to which I would advert is this—the qualification of persons who have the superintendence or care of a large body of men, to protect them from that danger to which human life is liable. If I desire to become a medical practitioner—to have the command of a ship, whether in the royal navy or in the mercantile marine service—a commissioned officer in the army, &c., I must pass a rigid examination before I can obtain my certificate of qualification. But, Sir, a man may be appointed a captain or manager of a mine, by the influence of friends, whether he ever knew practically the value of a fathom of ground or worked a single mine. For a mine to be worked judiciously and efficiently, the captain or agent should be, in my opinion, a practical, experienced, and thoroughly qualified man, who has earned his wisdom by personal use of the pick and the gad. The duties of the manager or captain of a mine is to live on or near the mine, so that he may have a perfect knowledge of all the underground operations, and to go himself underground frequently, and see that those operations are carried out in a miner-like manner,—but of this more anon. Perhaps, Sir, the lord may enquire of his toiler, when he was underground, to look after his interest, and how near to the bed of the river the adventurers had followed the lode; as I should ask Capt. Wolferstan, if I were a shareholder in South Tamar Mine.

At a meeting convened on Thursday last, it was resolved that an engineer be appointed to consult with Capt. Wolferstan as to the most effectual mode of stopping the fracture, and drawing the water out of the mine. If a committee of investigation had been appointed to visit the mine, and make a searching and impartial enquiry, and ascertain for themselves the most effectual plan of proceeding, it is more than probable they would become more enlightened than they ever will be by the proposed course. Mr. Editor, I will wait the result, and, in the meantime, remain a

Sept. 6. LOOKER-ON.

A MISTAKE.

SIR,—Your eccentric correspondent, Mr. Nicholas Ennor, ought to discriminate his groups of men as well as his groups of rocks. I have nothing in common with the professor who, during Mr. Evan Hopkins's absence in America, printed a chapter out of his work on gold fields as a pamphlet of his own, and thereby acquired that spurious reputation which enabled him to do such mischief in the gold mania of 1851-2. Mr. Ennor must dress his samples cleaner, and not mistake mundic for gold.

Sept. 2. D. MUSHET.

ANGLO-CALIFORNIAN GOLD MINING COMPANY.

SIR,—Having observed in your Journal, which came by the last mail, some insolent observations directed at me by an anymous writer, signing himself "G. G.," it is perhaps possible that you will give this a place, though it comes under a real signature. This person asks whether the amount of gold (138 ozs, then arrived) would be followed by any more, or whether the shareholders were to be content with that, and promises of more. In reply, I have to state that more will have arrived long before this reaches England; but as for any gold coming from their works after the quartz in the yard was worked up, about the middle of May, none certainly will, until the shareholders think proper to subscribe money to open shafts and drifts.

"G. G." says that Sir Henry Huntley should have been removed when Mr. Luke Williams was; and that Sir Henry will not go so long as there is pay to be got. To this I simply reply, that I never heard of, or saw, Mr. Luke Williams till my services were accepted for employment in this country; and that on my return to England, in Nov. 1851, the then board of directors voted me their thanks in the warmest and strongest language. To the remaining part of the observations of "G. G." I have no remark, I am myself a shareholder, and one who has paid for his shares: also, that had I remained only so long as pay was to be got, I should have left some time ago, for I am informed that it is many months since Messrs. Ommanney have received any pay from the board of directors on my account; and in this case the mining captain here is also placed.

I shall notice no more of your anonymous contributors, but I shall detail the causes of the present state of the company's affairs in California; and I will defy a refutation of the statements I shall then lay before the shareholders. H. V. HUNTLEY.

San Francisco, July 19.

ANGLO-CALIFORNIAN GOLD MINING COMPANY.

SIR,—At this season of the year, everyone tries to get a little change of air, and thus account for not having seen your statement, as to the past and present prospects of this for many years puffed up, but now apparently bankrupt, company, in time to answer it in your last Journal. Your statement is evidently from the directors, or how do you arrive at the conclusion that the liabilities of the company are 14,000*l.*? The public statement of the directors, about three or four weeks since, puts forth that but 11,000*l.* was all they owed, and that they had 1000*l.* in California to their credit, at which time some sympathy was very properly evinced towards the directors, as it appeared they were personally liable for a portion of the debts. I was one of the recent auditors, and refused to certify the annual accounts, unless the directors' own estimate of their debts and assets was severed from the yearly account of receipts and expenditure; for I entirely differed from them so to the results which they wished, or I would rather say intended, to show. Until the end of this week my mind is diverted by a little recreation; but I am sure your impartiality will this next week allow me space, as a shareholder considerably interested, and a recent visitor, to make a common-sense statement, as to what I believe to be the real position of affairs, and my only object in now writing to you is to request that the shareholders may suspend their opinions and operations, until I lay a fair and I hope impartial statement before them, and state the course which a few dissatisfied shareholders, with myself, intend to pursue. W. A. COOMBE

Milton, near Gravesend, Sept. 3. (One of the recent auditors).

Meetings of Public Companies.

RHOSYDD SLATE QUARRY COMPANY.

The adjourned general meeting of proprietors was held at the offices of the company, Moorgate-street, on Tuesday,—Mr. JAMES OLIVER in the chair.

Mr. BACON (the secretary) read the notice convening the meeting, and the minutes of the last, which were confirmed.

The CHAIRMAN then read the following report of the committee:—

The committee of management, at their last meeting, intimated to the shareholders that they were unable to submit to them a statement of the accounts, in consequence of the vouchers not having been forwarded by Mr. Harper; since that time the committee have made repeated application for them, and they have this morning received a statement from Mr. Harper's solicitor, which requires investigation. Your committee would recommend that the present meeting be adjourned to Sept. 30, for the purpose of having the accounts properly audited; and they also trust by that period to be enabled to submit to the shareholders an estimate for the proper development of the quarry, &c., and also to lay before them a plan for the raising of additional capital.

The CHAIRMAN said he had to propose a further adjournment, in order that an investigation might be made of the accounts of Mr. Harper, and as the vouchers were only just received, he would name the 30th of September for the adjourned meeting, by which time he hoped to have the accounts completed and audited, and to suggest some means for raising the necessary additional capital.

The CHAIRMAN then read the following report of the manager, Mr. J. H. Oliver:—

I beg to send you a short statement of the position of the Rhosydd Quarry, and the works in progress there. We have on the second floor seven bargains at work, one of which is not open to daylight, from the top not having been removed, but this I hope will be effected in a few weeks. This bargain is, therefore, not producing many slates, though we expect it will be one of the best bargains yet opened. We have nearly got down to a third floor, by driving under and following the clay slant downwards. This floor is intended to be worked by means of a small water-balance until our third level shall be completed. The estimates for this water-balance are being prepared. It has been finally decided, after having had the best advice from competent and practical parties in our neighbourhood, to drive a third level from the north-east side of the quarry, at a depth of 30 yards below our second level. This will give us two additional floors, and has the following advantages over the former proposed plan of a deeper and larger level:—1. It will be completed in a much shorter time.—2. The cost will be far less.—3. That if the quarry is what we have every reason to suppose, this shorter level will develop the quarry sufficiently to enable us to produce a very large supply of slate for some time to come, will put us into a dividend-paying state, and then, if it should be thought necessary, will give us plenty of time to make another and a deeper level; but this it may not even be necessary to make, at least for a very great space of time. The estimates for this level I have not yet been able to procure, owing to an affliction in the family of the engineer, but I hope shortly to have it surveyed, and an estimate of the cost, and the time it may be expected to take to complete. Upon this will, in a great measure, depend the amount necessary for further developing the quarry. Our make of slates has continued about the same; this I expect will increase, now that we have the saw-mill at work. It was put in operation on Friday last (Aug. 29), to see how it worked, and to test the staunchness of our dam; it is not yet quite finished, but will be very shortly. It is necessary to make a small incline from the end of our tip down to the mill; this is in progress, and, when completed, all our slates will be made on the bank below the mill. We endeavour to exercise the strictest economy at the works, and trust that by paying close attention to the quarry, and a judicious outlay of the further capital that may be necessary, we may receive those returns for our money invested to which we have looked forward.

The CHAIRMAN said he had nothing to add at present, and should move that the meeting be adjourned to Tuesday, the 30th September.

Mr. WELBORNE said that, looking at the whole affair, there was no evidence of management. He would take the road first, which was the worst ever made, and in its present state a great portion would require to be re-made, to economise the carriage; the pitch of the road in places was 1 in 5, and from the nature of the materials used, it would require five or six horses to draw a load. He found men breaking killas to mend the road, which would not bind. The charge for carriage ought to be 3*s.* per ton down and 8*s.* up; but he believed it was now costing 3*s.* 6*d.* per ton down and 10*s.* or 12*s.* up. If the returns he had moved for at a former meeting had been produced, they would have been enabled to have formed something like an accurate judgment of the cost. Again, the sheds for slate-making were too near the tramway; they ought to have been built further back, and a branch from the main tramway laid down for the bargain men's own use, so as not to impede the general transit of waste and rock from the quarry, as in the Penrhyn Quarries; this would also obviate the necessity of the men carrying the slates on their backs, which was a loss of time equal to 3 per cent. They might obtain a much larger number of slates at a greater profit, if they pursued a proper course of quarrying, instead of undermining, as they were doing at present. There was no system with regard to the horses, and when they saw the loss of labour and want of care, he was bound to say he could not trace any management. He (Mr. Welborne), upon examining the engine-house, found a stream of water equal to 10 gallons per minute had worked its way under the foundations and was rushing down as through a drain, which ought not to have been allowed for one hour, as it was destroying the property. There was no doubt that the Rhosydd Quarry was one of the finest in the world; but it was want of proper management that destroyed it. He would undertake to make a railway from Rhosydd to Port Madoc at a saving of 30 per cent. upon the proposition made by the committee. Where were the agents, and what were they doing? He wished to know what was being done with the water-wheel, as he had serious doubts whether in dry weather or in frost they would be able to work it, and from three to four months in the winter, it was reported, the water was generally frozen!

A PROPRIETOR considered that some explanation ought to be given before adjourning the meeting; the only reason at present assigned being the delay in receiving Mr. Harper's accounts.

The CHAIRMAN, in reply to Mr. Welborne, stated that he had the pleasure of meeting him at the quarry on Friday last, and certainly for a very short time, as he did not think Mr. Welborne's visit lasted five minutes. He would not follow him through the various charges made against the management, and the various assertions he had just heard, many of which were without foundation, but would reply to one or two of them. First, with regard to the road being the worst ever made, he denied it, and though it might not be in as good order as he could wish, yet it was improving very much, and he expected by paying close attention to it, which they were doing, that it would shortly be as good as the steepness of the ground would permit. As to the statement of the cost of carriage, it was quite incorrect; and as to the offer of a neighbouring proprietor wishing to join them in making a railway direct to Port Madoc, he (the Chairman) begged to say it was the first he had heard of it. They had heard a very long lecture from Mr. Welborne upon the way the quarry had been opened, and his opinions upon what he saw during his five minutes' visit; but he must be allowed to say that he preferred the opinion of practical men who had been kind enough to favour them with their advice.

Mr. WELBORNE denounced the system of working, and contended that the appointment of the manager at the commencement of operations at the quarry was a gross job, and he warned the shareholders not to make a second similar appointment.

Mr. PEARCE seconded the resolution for the adjournment, as it was absolutely necessary that the accounts should be strictly examined. With regard to the observation that the appointment of the manager was a job, he had nothing to do with it.

The CHAIRMAN then put the resolution for the adjournment to Sept. 30, which was unanimously carried.

SOUTH TAMAR CONSOLS MINING COMPANY.

A special general meeting of adventurers was held at the offices of Mr. Kieckhoefer, Threadneedle-street, on Thursday,—Mr. W. A. THOMAS in the chair.

Mr. KIECKHOEFER (the secretary) read the notice convening the meeting, which stated that about 5 o'clock on Sunday evening last the River Tamar broke through into the mine and had completely filled it.

The CHAIRMAN said he had often had the pleasure of being in the chair at their meetings since the resuscitation of the mine. He had watched its progress, and he had sat there sometimes to congratulate them, and sometimes to announce to them that their prospects, however well founded, had not been realised. But the greatest misfortune of all was what he had to announce now, and which was the total destruction of their property. The River Tamar had broken into the mine at the deepest part of the river. They were all aware that the best part of the mine was under the river. They had to congratulate themselves that no lives had been lost, the accident having taken place between eight and nine on the Sunday evening, when there was no one in the mine; had it taken place on Monday morning, there would have been 95 persons working in the mine, whose lives in all probability would all have been sacrificed. The business now was to realise the assets as quickly as possible, and all that they required their attendance there that day for, was that they might give the committee power to do so.

A SHAREHOLDER—Had you any indication of the disaster?

Mr. WOLFERSTAN (the manager) replied that they had not. He first heard of it on Monday morning, and after telegraphing here, he went to the mine, and found that it was quite full of water. He believed that the extent of the orifice through which the water had come was about 10 ft. long and 4 ft. wide. It appeared to him that the cross-course had given way. The probability was that they tapped the stream at the 80 fathom level, some three years ago; since that time they had come under the 102, the water had percolated through the cross-course, had sapped the bottom part of the foundation, and with the weight of water it had dropped. In his opinion there was no possibility of redeeming the mine. The water might be pumped out and dammed out for a time, but that would be attended with a great expense, and the water would probably break through again in the same manner. He saw no alternative but to realise the assets. The ore on the surface would be quite sufficient to meet the current expenses.

Mr. HILL wished to know whether it was certain that the River Tamar had broken into the mine?—Mr. WOLFERSTAN replied that that was most assuredly the case.

Mr. HILL said the same accident occurred in the Thames Tunnel years ago; and the question was whether they should abandon 60,000*l.* worth of property, which might be rescued for 2000*l.* He hoped they would not be frightened, as the case did not seem to be utterly hopeless.

Mr. WOLFERSTAN said the mine was very extensive, and it would take nearly two years to pump out the water, for which they would require 3000 or 4000 tons of coals; and as the mine was drowned it would require altogether new pitwork.

A PROPRIETOR wished to know the position of the mine at the time of the accident?

Mr. WOLFERSTAN said the prospects were excellent, and they were looking better at every point.

A PROPRIETOR enquired whether there was enough upon the mine to pay all the liabilities?—The CHAIRMAN said, after paying all expenses to this time, he expected to have a balance of 2046*l.* 13*s.* 5*d.* to divide, according to a rough statement made by the secretary, and that was independent of the machinery and materials on the mine, and subject to any expenses incurred from the 1st of this month.

Mr. WOLFERSTAN was of opinion that the ore at surface would more than pay the expenses. The only course to adopt was to wind up the concern; but if he should have any reason to alter his opinion he would send up a report.

Mr. HILL considered it would be advisable to have further information from Mr. Wolferstan before they decided upon closing.

Mr. KEOGH was of opinion that, after the explanation by Mr. Wolferstan, they ought to wind-up the concern, without frittering away their resources. Mr. Keogh concluded by moving a resolution to that effect.

The CHAIRMAN then put the resolution that the concern be at once abandoned, and the assets realised the earliest opportunity.

Mr. HILL moved, as an amendment, that an engineer should be selected by the committee, to consult with Mr. Wolferstan as to the present state of the mine, and that Mr. Wolferstan be requested to make an inventory of the engines and materials, and put his valuation upon the same, and that he report to the committee thereon.

The CHAIRMAN having put the amendment, it was carried by 14 against 9.

The proceedings terminated with a vote of thanks to the Chairman.

WEST CRINNIS MINING COMPANY.

An extraordinary general meeting of shareholders was held at 27, Austinfriars, on Wednesday, Mr. CHARLES HINKS in the chair.

After the usual preliminary proceedings, the CHAIRMAN stated they were met that day to consider the financial position of the company. They must either make a call, issue shares, or see if it would not be necessary to wind-up the affairs of the association. These were the three plans he had to submit to them, and he wished they would earnestly and thoroughly discuss them. He was aware there were many persons who could not pay their calls. He wished to know the opinion of the shareholders as to what was the best course to be pursued under present exigencies. He did not wish to submit a number of resolutions on paper, which looked very well; he had seen enough of moonshine, and his desire was now to obtain the substance. They had arrived at the period when they must either stop or go on. The shareholders had shown great apathy, but since the last circular was issued there had been some signs of activity and vitality amongst them.

A PROPRIETOR asked what would be the amount of money required?

The CHAIRMAN said that, according to Captain Webb's estimate, the sum of 5000*l.* would be necessary to erect a new engine, and to fork the mine down to the 40.

Mr. PARKER wished to know the number of shares which had been applied for? At the last meeting there were many who had promised, and it was desirable to know how many had come forward.—The CHAIRMAN stated that the number of shares which had been applied for was not so great as they had anticipated.

Mr. PARKER observed, they had seen that the idea of issuing shares at 2*l.* 10*s.* each was futile. In order to induce old shareholders or the public to come in, it was necessary that some advantage should be offered to them. He should, therefore, propose that they should issue 3000 new shares, to be denominated preference shares, and to receive the amount of 10 per cent. for five years above the ordinary shares, after dividends were declared.

Mr. PIERCE said, the mine was now in difficulties, and it was necessary they should meet them. The property was a good one; it had a great repute in the neighbourhood, and he had no doubt, if it were only energetically worked, it would pay well.

A PROPRIETOR enquired whether, in the event of Mr. Parker's proposal being adopted, some persons in the neighbourhood of the mine might not be induced to take shares?—Mr. CHARLES observed, he was a native of Cornwall, and well acquainted with the district. He thought it very improbable that any Cornishman would invest his money in any mine unless it was a dividend-paying one.

Capt. WILSON enquired whether there was any person connected with the committee who had seen the mine, and could tell them if it were promising or not?

Mr. PIERCE said he had been to the mine, and from all accounts he had heard, it appeared to him that it only required means to develop it so as to afford returns; most probably, however, Mr. Charles, who knew the district, would be able to afford the shareholders better information than he was in possession of.

Mr. CHARLES stated that he knew the mine from the time he was eight years of age. He had always heard that the ground was highly mineralised; in fact, it was situated in one of the best districts of the county.

A PROPRIETOR enquired what price they had paid for Wheal Regent?

Mr. PIERCE stated the amount was 300*l.* The money for this had been advanced by a creditor when they first took West Crinnis; the price then demanded for it was 4000*l.* He believed that if the two mines were worked together it would be of great advantage, and ultimate profit to the shareholders of West Crinnis Mine.

Mr. PARKER then moved that the committee should be authorised to issue 3000 shares, at the rate of 1*l.* 10*s.* each—such shares to bear a preferential rate of 10 per cent. above the ordinary shares for a period of five years after dividends were declared, the shareholders of the West Crinnis to have the prior option of taking them.

This was seconded by Mr. PIERCE, and carried unanimously.

A vote of thanks was then given to the Chairman, and the meeting separated.

THE BENDERG MINING COMPANY (LIMITED).

At a meeting of the provisional committee, held at the offices, 30, Cannon-street, on Wednesday, Mr. R. BOYLE (the Chairman) stated that, in compliance with a resolution, a preference had been given to the shareholders in the Clew Bay Mines to take up the shares in this company, and that he was happy to state that they had shown their great confidence in the value of the property, by subscribing for more than one-half the shares. As, however, a few hundred remained unallotted, he suggested the propriety of, and the meeting concurred in, offering the remainder to the public. The works at the mines were progressing rapidly, and it was expected that the water-wheel would be completed in about a fortnight, and the sinking resumed. Assays of the ore had been made, which gave a very high per centage of copper, varying from 9½ to 24½ per cent. The mine had been surveyed by Capt. Higgins, whose report was as follows:—"I have made a minute examination of this property, which is situated within a never-failing supply of water. There are two lodes which have been worked, having a stratum of a light and dark blue mica slate, mixed with shale and quarts. The Benderg lode bears north-north-east, and has a good appearance of becoming productive. The matrix is congenial for copper, being composed of quartz, capel, gossan, and ore, and has a fair underlie of between 2 and 3 ft. in a fathom. An adit level has been driven 25 fms. on course of the lode, orey throughout. An engine-shaft is sunk diagonally on its course 6 fms. below adit; the lode is yielding small deposits of copper ore, and in the last 2 fms. is 6 ft. wide: 15 fms. east a winze is sunk to the depth of 5 fms. below adit, but the lode is at present divided by a horse of ground; the lode here is very encouraging, yielding a small quantity of rich ore, and at its junction, which I expect in 1 or 2 fms. sinking, important results may be expected. I have found such to be the case with many of the best dividend-paying mines. This winze is intended for proving the ground and ventilating the next level, which should be driven at the 15 fm. level below adit. The Bend lode bears north and south, and forms a junction with the Benderg lode 30 fms. from the engine-shaft. No operations of consequence have been undertaken on this lode, nor will any be required before the engine-shaft is sunk to the 15 fm. level, when it should be intersected by a cross-cut about 8 fms. long, so that one shaft will command both lodes. These lodes look well on the back, and I have not the least doubt but that they will be found productive at the 15 fm. level. A more promising mine at such a shallow depth I never saw, and were it in Cornwall or Devon, it would command almost any amount of money."

ORIENTAL GAS COMPANY.

A special general meeting was held on Wednesday at the London Tavern, Bishopsgate, Capt. BARBER in the chair.

Mr. BADDELEY, the secretary, read the notice convening the meeting.

The CHAIRMAN said the present meeting was an extraordinary general one, convened for the purpose set forth in the notice just read by the secretary. The proprietors were aware that they were completely registered under the Act of Parliament then in force, but an Act had passed last session by which the executive had power to place them under the Act with unlimited liability, without the consent of the shareholders, but the directors wished to take the necessary steps for limiting the liability, for which purpose it was necessary to call them together. He (the Chairman) felt satisfied that no sane man would object to sign a deed that would limit their liability; he should, therefore, move that it was expedient to register the company under the Joint-Stock Companies Act of 1856, with limited liability.

Mr. MAJOR wished to know whether the limit was to the extent of the present amount of capital, or whether the directors had the power to increase it?

Mr. FAWCETT explained that they might raise money with the consent of the proprietors, but could not do so without calling a special general meeting for the purpose.

The CHAIRMAN attributed so few being present to the fact that the business was so plain, and the proprietors might rely that the board would not incur any debts.

Mr. MAJOR wished to know when there was a probability of the 18*s.* upon the new shares being called up?

The CHAIRMAN said the question had been discussed at the board, and they expected to call 3*s.* in January next. The capital raised was for 27 miles of mains in Calcutta, but it had been necessary to increase their operations, and they would now require about 50 miles of mains, although they had determined that it was not expedient to go to Bombay or Madras.—The Chairman, in answer to further questions, stated that the rainy season coming earlier than they expected had done some damage to the tanks, which would be repaired at a trifling expense. They had exclusive privilege from the Government of Calcutta, not only to light the town at 10*s.* per 1000 feet, but also the exclusive privilege of making gas for 21 years, and he hoped the company would be in full operation by Jan. 1 next. The board had made no arrangement yet as to the minimum price to be charged for private lights.

Mr. FAWCETT, in answer to a question, explained that, under the constitution of the company, they could not raise additional capital without the consent of two-thirds of the proprietors present at a meeting.

The resolution for limiting the liability of the company was then unanimously passed, and a vote of thanks to the Chairman terminated the proceedings.

PORTABLE GAS.—A company has just been formed for the purpose of bringing an Improved Portable Gas Apparatus into general use, by which it is hoped to attain the desideratum of enabling consumers to produce their own gas at a small cost. The raw material from which the gas is made will be supplied by the company, and the apparatus can be moved with facility—a machine capable of supplying ten burners for eight hours per night, for a week, occupying but a very limited space. The preparation of the gas is very simple, and the apparatus can be managed by any ordinary domestic with safety. The apparatus consists of an oil-can or reservoir, a stove, in which is set the retort or generating apparatus, a syphon or condensing-box, a water-tank, and a gas holder. The reservoir is a simple cylindrical vessel, containing the oil from which the gas is generated; the retort, a hollow iron cylinder, with a flat cover bolted and screwed to a projecting rim; the stove containing the retort, of sheet or cast-iron, arranged upon the most approved plan for economising the heat; the syphon-box or condenser, a cast-iron vessel, with movable lid bolted and screwed upon it—this is divided into compartments, and half filled with water, with a syphon attached to keep the water, at all times, to its proper level; the water-tank in which the gasometer floats, of either wood or iron, and the gas-holder of sheet-iron, suspended on fixed pulleys, and forming the receiver for the gas, when generated and ready for consumption. The gas produced was experimented and reported upon by Professor Renwick, of Columbia College, New York; and it appears that the flame was pure and white, and that there was no perceptible smell arising from the burning gas. The reservoir whence the decomposing apparatus was fed was examined and guaged: it was found to contain a viscid liquid, which was the second running obtained from the decomposition of resin. The first running from the same process, which Mr. Longbottom preferred, was more viscid, having the consistence of thick treacle, and was unquestionably richer in gas. Professor Renwick states that the apparatus is not only simple, but that he did not conceive that any danger could attend its use, and that it could not add more to the fire risks than a common stove. Very flattering testimonials have been received from parties who have tried the system, and the feeling unanimously expressed is that of the greatest satisfaction.

ARTIFICIAL MEERSCHAUM.—If carbonate of magnesia be mixed with an eighth of its weight of calcined magnesia, and a little paste of lime obtained from calcined marble and solution of soluble glass be added to it, the mass, after complete drying, is not unlike meerschaum, and may find employment in the arts. The alkaline salt produced is extracted by water from the dry meerschaum, which is then boiled with wax.—*Chemical Gazette.*

THE LONDON GENERAL OMNIBUS COMPANY.—The traffic receipts for the week ending August 30 were 10,622*l.* 11*s.* 8*d.*

Mining Correspondence.

BRITISH MINES.

ABBEY CONSOLS.—E. Williams, Aug. 30: The eastern level is improving, and it will yield, by its present appearance, 12 cwts. of ore per fm. The 14 is in a good lode, and producing some very good stuff. The western level is in good orey ground, and will yield, by its present appearance, 8 cwts. of ore per fm. No. 1 stope, in back of the same level, is improving, and will yield 10 cwts. of ore per fm.; No. 2, 16 cwts. of ore per fm.; No. 3, 10 cwts. of ore per fm. Our dressing operations are getting on steadily, and on Wednesday next I shall be ready to sample another 20 tons.

ALFRED CONSOLS.—M. White, Sept. 1: There is no change in the lode at Field's engine-shaft sinking below the 140; neither in the 130 or 120, on the south lode, since the last report. The lode in the 100, east of Davey's engine-shaft, is worth for copper ore quite 60*l.* per fm. We shall now commence to take down the north part of the lode here, before driving this level any further east. In driving the 100, south of this shaft, we have intersected the south lode, which is about 2 ft. wide, yielding some stones of good copper ore. This is 11 fms. south of the north lode in this level. The north lode in the winze sinking below the 80, east of this shaft, is worth for copper ore quite 100*l.* per fathom, and we think likely to improve. This winze is from 6 to 7 fms. east of the 100. The south lode in the stopes east and west of winze is worth for copper ore 70*l.* per fm.

BEDFORD CONSOLS.—J. Hodge, Sept. 3: We are cutting down the whim and footway shaft in order to make it our engine-shaft; it is now 7 fms. deep, its size to that depth 8 ft. by 6 ft.; we are now making it 12 ft. long by 6 ft. wide. We have let this work to be completed to the present depth, and the timber work for collaring up and dividing, inclusive, for the sum of 12*l.*; this work is progressing favourably, and will, I expect, be completed in a week hence, when the sinking will be resumed. We have not as yet any water in this shaft; however, we shall place the horse-whim here without delay, in order to compete with the water we may have soon; the lode in the bottom of the shaft is 5 ft. wide, exhiting the promising appearances I have often reported. I fully expected here a good lode of copper ore at no great depth.

BEDFORD UNITED.—J. Phillips, Sept. 3: We are driving by the side of the lode in the 130 east; in the same level west the lode is large, and spotted with ore. The lode in the 115 west is 3 feet wide, and will yield 3 tons of ore per fm.; in the rise above the back of this level the lode is worth 3½ tons of ore per fm. The lode in the 113 east is without any ore to value; the stopes in the back of this level will turn out from 6 to 7 tons of ore per fathom, and in the bottom the stopes are producing about 4 tons of ore per fm. Jackson's stopes in the 103 will yield from 5 to 6 tons of ore per fm. The other parts of the mine are without any important alteration.

BOILING WELL.—J. Delbridge, Sept. 1: In the 60, east of engine-shaft, the lode is 6 ft. wide, yielding fine stones of copper ore, lead, and jack; the lode in this level is very much improved, compact, and with very little underlay. It is well to drive this end with all dispatch, and from present appearances the eastern ground cannot fail to yield a large amount of ore under the ore ground now in work. In the 50 end east the lode is in two branches, each containing a little copper and lead, not to value at present. In the 40, on the south part of the lode, the lode is yielding stones of ore, not to value. In the 30 east, on the south part of the lode, the lode is yielding good stones of copper and lead. In the 20, east of shaft, on the south lode, the lode is unproductive. In the 10 east the lode is opening tribute ground. In the winze sinking below the 30, on the south part of the lode, the lode is worth 12*l.* per fm.; this is sinking to prove the lode driven on in the 40; lode unknown.

BOLENOWE.—W. Roberts, Sept. 2: No alteration to notice since last reported.

BORINGDON CONSOLS.—W. Godden, Sept. 4: There is no material alteration in the character of the lode in the 48 end east since last reported on. We have put a pare of men to drive the western end through the south part of the lode, which is gone off or divided from the northern part. We have intersected a slide in driving the 12 end, and we intend driving through the capels and lode, as it will be advantageous so to do. This slide is intersected not many feet under the lode, where we have splendid faces of copper ore against the killas, and good spots and stones of gray and black copper ores. We have driven 19 fms. since the lode was cross-cut through.

BRYNTAIL.—J. Roach, Sept. 5: The 10 east, on the new lode, has slightly improved in the past week, and is producing a small quantity of solid ore. The winze sinking under the 10 is on the north part of the lode, and is still yielding about 1 ton of ore per fathom. It is still my impression that the principal part of the lode is north of the present 20 fm. level, which I shall intersect by a cross-cut as soon as the winze is communicated with that level. The winze sinking under the 30 is on the south part of the lode, and producing good stones of ore; this I shall suspend until the winze is holed and the cross-cut driven north. The stopes are the same in quality as last reported on. The parcel of ore we are forwarding to Newtown.

BUCKLAND CONSOLS.—J. Carpenter, Sept. 3: We have discovered the lode east of the cross-course referred to in my former report, and have since been exploring on it some considerable distance east on its course, where we find it presenting very good indications; its general character is very flattering, being composed of a fine gossan, prian, and quartz; its average width is 2½ ft., the bearing 15° north of west, and the angle of depression 14°. I have set a shaft to sink on the course of the north lode, east of the great cross-course, 5 fms., for 5*l.*, to be carried 10 ft. long and 5 ft. wide. This place, I think, is where we are likely to carry out the main operations of the mine, to command the south and other lodes we may discover north of the explorations already being carried into effect.

— T. Rosewarne, Sept. 4: I beg to inform you, on my return from town, I proceeded to this mine, and am happy to inform you that I never saw the lode looking so well as at the present depth. There are three lodes in the shallow adit level, which appear to be coming together east, consequently I verily believe that just where the engine-shaft will be sunk is the place where the three lodes will form a junction, and nothing can prevent our having a course of ore.

BUTTERDON.—F. Grenfell, Sept. 3: The engine-shaft is sunk 3 fms. 4 ft. below the 43 fm. level; towards the south end of the shaft, both the western part of the lode and branch are much the same as noticed in my last two or three reports; but north of this, where the two parts are united, the lode is 14 inches wide, good saving work, composed of fluor-spar, lead ore, with good stones of ore; and from the appearance of the ground in the lowest point in bottom of the shaft, I hope it may be seen by our forthcoming weekly reports that greater progress is being made in sinking, as also still greater improvements in the lode.

BWLCH CONSOLS.—R. Northey, Aug. 30: No. 1 stope, in the back of the 40, is worth 12 cwts. per fm.; No. 2, 15 cwts. per fm.; No. 3, 11 cwts. per fm.; No. 4, 5 cwts. per fm.; No. 5, 12 cwts. per fm. No. 1 stope, in the back of the 27, is worth 3 cwts. per fm. Within the last fortnight, we have cleared the 50, east of shaft, back to the boundary, and by Tuesday next we shall put a pare of men to stope; it is worth from 10 to 12 cwts. per fm. I have put a pare of men to stope east of shaft in the back of the 40, which is now worth 6 cwts. per fm. No change in the 27 end west since last report. The 40 is poor, and I have put the men to cross-cut north in it at the present end. The 50 has been driven in a westerly direction, about 3 fms. south of the lode, for a considerable distance. We have driven a cross-cut north about 3 fms., and cut the lode, which is about 8 ft. wide, and some very good branches of lead ore. According to my dialling, we have about 10 fms. more to drive to get under the best orey ground in the 40. Altogether, the 50 is looking very kindly; although the stopes generally are not producing so much ore as they did a few months since, we are breaking quite as much stuff, and the prospects are looking a great deal better in the 50 for a more lasting mine. The stope east of the winze, in the back of the 50, is worth 8 cwts. per fm.

CAMBORNE CONSOLS.—Wm. Roberts, Sept. 2: In the 10 west, on the counter, the lode is 1½ ft. wide, producing ½ ton of ore per fm. Other bargains are much the same as reported for some time past.

CARRACK-DEWS UNITED.—William Hollow, jun., Martin Dunn, Sept. 1: The lode at Battery shaft is just as last reported; the falling off here is owing to a split in the lode. In the 42 fathom level east the lode is small and poor, though there is a little ore in it. The same applies to the lode in the 30 fathom level. No. 1 winze, below this level, is holed to the rise in back of the 42 fathom level. In No. 2 winze, below this level, the lode is 18 inches wide, worth 3*l.* per fathom. In the winze, on the south lode, it is 15 inches wide, poor. At Eley's, the lode at the shaft is 18 in. wide, composed of spar, mundic, and capel, with stones of ore, but not sufficient to value; it has a very kindly appearance. In the 32 east the lode is worth 4*l.* per fm. In the 32 west the lode is 14 in. wide, poor. We sampled, on Tuesday last, 59 tons—viz., 34 tons of good quality ore, and 25 tons of halvans.

CARVANNALL.—W. Roberts, Sept. 2: At the engine-shaft sinking under the 118 the lode is 2¼ ft. wide, principally composed of mundic and crystallised iron. In the 118 west the lode at present is small and unproductive. In the 106 west the lode is 4½ ft. wide, containg mundic, prian, and a little ore. Other bargains are without alteration. The tribute pitches are turning out well.

COLLACOMBE.—S. Mitchell, Sept. 2: During the last month, the 62, west of Morris's shaft, has been driven 6 fms. 4 ft.; the part of the lode carried, 2 ft., is composed of soft quartz, white prian, capel, and rich copper ore. The 62, east of Morris's shaft, has been driven 6 fms. 2 ft.; the lode is about 3 ft. wide, composed of capel, mundic, white prian, and ore. About 14 fms. have been stoped in the bottom of the 60, and the lode worth, on an average, full 30*l.* per fm. The western shaft has been sunk 3 fms. 4 ft.; making altogether 10 fms. 5 ft. below the 50: throughout this extent the lode is a good course of ore, worth from 25*l.* to 30*l.* per fm.; this shaft is communicated to the rise in the back of the 62. About 33 fms. have been stoped in back of the 50, and the lode worth, on an average, 25*l.* per fm. All other underground operations progress favourably: 153 tons of good ore were sampled at Morwellham on Friday last.

CUBERT UNITED.—J. Trewin, Aug. 30: The lode in the 76, south end, is for the present small, producing a little saving work for lead. The stopes in the back of this level are worth 16 cwts. of lead per fm. The lode in the north end is from 15 in. to 18 in. wide, composed of quartz, carbonate of iron, and mundic, producing occasional good stones of lead, and of the same favourable appearance. The lode in the 76 end, south of the sump winze, is 14 in. wide, composed chiefly of quartz. The stopes in the back of the 66, north of Bodelly's rise, are worth 5 cwts. of lead per fathom. The stopes south of the engine-shaft are improvrd, now worth 1¼ ton of lead per fathom. No change to notice in the stopes north of Towsey's shaft; they are worth 7 cwts. of lead per fm. The lode in the 66, south of Towsey's shaft, is 1 ft. wide, composed of friable quartz, flookan, and mundic, producing from 3 to 4 cwts. of lead per fm., and of a very promising character. During the past week I have set a stope in the bottom of the 76, south of the engine-shaft; the lode at this point is worth 1½ ton of lead per fm. We have on the mines, dressed and undressed, about 31 tons good lead ore.

CWM DAREN.—F. Evans, Aug. 30: The 50 west is poor for copper and lead, and lode small. The stope in back of the 40 west is turning out orey stuff, and will more than pay for working. The stope in back of the 30 at present is poor for lead and copper. We shall sample about 10 tons of copper ore on Monday next. We are crushing our lead stuff, from which I should say we shall have 2 or 3 tons.

DAREN.—M. Francis, Aug. 30: We have made a trial at Daren to the west of the best ore stopes on the north lode, in Level Coed, by cross-cutting from the south lode, but in this place we do not find the north lode orey. We find pretty good ore in Oliver's level, which would be of importance to the mine if it continue westward; but as it was not orey over this level, we are not certain of it. We will try it quietly, however, without much cost, until we get further into the lode. There is not much change in the yield of the ore bargains, or in the setting list.

DEVON BURRA BURRA.—J. Lord, Sept. 3: The engine-shaft is sinking satisfactorily; the ground continues to present a very promising appearance, although it requires blasting. We are pushing on the respective operations with all possible speed. The men are exerting themselves to the utmost, commencing early on Monday morning, and keeping all the time occupied until late on Saturday night.

— J. Spargo, Sept. 3. I beg to inform you that I was underground in the mine yesterday, and beg to inform you that we are making favourable progress in sinking. The stratum is a micaceous slate, traversed by branches of soft spar, with spots of copper ore, which I expect to be the properties of the lode. If the ground holds as favourable as at present, we hope to be at the 40 in about five weeks. Our wheel still keeps the water extremely well, and will do so until we reach the 40, and perhaps much deeper. I am much pleased with the appearance of the ground, and have every reason to believe that, at the intersection of the lodes, we shall meet with a course of ore.

DEVON KAPUNDA.—J. Richards, Sept. 1: The 30 plat has been completed, and a cross-cut driven north 5 fms., where it intersected the north lode, which, from this point to the present end, 16 fms. east, will average 2½ ft. wide, composed of mundic and quartz, intermixed with killas. A cross-cut has been driven 9 fms. south in the 50, in a light congenial killas, and, according to the underlay in the 34, the lode should be some 3 fms. ahead. The 34 has been extended altogether from the point of the horse 14 fms., and for 12 fms. of this distance the lode will average from 1 foot to 3½ ft. wide, containing light capel, mundic in abundance, quartz, prian, and good stones of ore; for the next 2 feet the lode materially improved, and yielded at least from 15*l.* to 20*l.* worth of ore per fm., and, judging from present appearances, it will improve. The lode in the back and bottom of the driving, for the length driven in the orey part, is worth 15*l.* per fm. The 30 cross-cut south will be driven for intersection of the lode as fast as possible, and from the favourable character of the lode in the 34, it is but fair to calculate that something good will be met with.

DEVON WHEAL BULLER.—W. Neill, Sept. 4: In the 32, driving west, the lode is not quite so large as last reported, now 1½ ft. wide, principally ore and mundic—a very kindly lode; the 20 fm. level, driving east, is still producing some good ore. The stopes in this level, both back and bottom, continue much the same as last week. The new shaft on the south lode is now in good course of working. The flat-rods connected to our present engine for pumping the water work exceedingly well. The lode in the bottom of the shaft is about 2 ft. wide, producing some good stones of copper ore. I think there is every appearance of an improvement as we get deeper.

EAGLEBROOK.—H. Tyack, Sept. 2: We have now a good supply of water for our wheel. For the past week we have been crushing night and day, and shall have, in about nine days from this time, 20 tons of lead clean, of good quality. I have nothing new to inform you respecting our underground operations; the water is out of the 20, and the men are regularly at work. All our surface operations are progressing satisfactorily.

EAST BLACK CRAIG.—J. Smitham, Aug. 30: The ground in the 12 fathom level, west of shaft, is more favourable for driving in, and it has a more kindly appearance for lead than when it was last reported on; there are a deal of branches and faces of spar scattered through it, with some small spots of jack and sulphur. The pitch in the back of the 22, west of shaft, over the ladder road winze, is not looking so well for lead as when last reported on, but it is still a good pitch, and I think we shall get from 9 to 10 tons of lead, or more, from it this month. The pitch in the back of the same level further west is poor. There is no alteration in any of our tribute pitches worthy of notice since I wrote last. I think all our tributers are getting wages this month, with the exception of two or three pares.

EAST HENDER.—W. C. Vivian, Sept. 2: In the adit level east the lode is large, producing good stones of yellow copper ore. In driving east on the south part, the lode is poor; we therefore think of resuming the cross-cut south on Saturday next.

EAST ROSEWARNE.—W. C. Vivian, Sept. 2: The engine was started on Friday evening last, and on Saturday at 12 o'clock went regularly to work; it is a good one, and works well. We have forked to the 12, and are now preparing to drop to the 22. We shall have a large quantity of stuff to clear from the 12, but this will not take us long to do, as we have a whim on the shaft immediately west of the engine-shaft. As soon as we have drained the mine to the 22, we shall be able to examine the ore ground standing in the bottom of the 12, and let the pitches there. The adit ends are looking much the same as when last reported on.

EAST TOLGUS.—We are progressing favourably in sinking the engine-shaft below the 34, and also in driving the adit end south from the new shaft. The lode in the 12, driving west of the engine-shaft, is small and poor. The lode in the 12, driving west of the engine-shaft, is now 15 inches wide, composed of mundic, peach, and sugar-spar, with spots of ore. The lode in the 22, driving east of the engine-shaft, is larger than when last reported, but is not so good, being now 7 feet wide, but has a horse of killas in it, and the leader part is 3 ft. to 4 ft. wide; is is very much corrupted with mundic and jack, but is a fine strong open lode. The lode in the 34, driving west of the engine-shaft, is 10 in. wide, producing stones of ore, but not to value; the lode in the same level, driving east, is 4 in. wide—poor. I hope the men cutting plat in the 20, at flat-rod shaft, will complete it in two or three days, when we shall resume driving the 20 east and west of at-rod shaft.—Capt. Joseph Jewell (Sept. 2) reports that the engine-shaft is sunk perpendicular to the depth of 5 fms. 5 ft. below the 34, and is sinking by three men and three boys, at 21*l.* per fathom. North Buller lode looks promising. The ground in the deep adit, driving south towards the engine-shaft, is moderate; this level has been driven 103 fms. south from the last shaft sunk on it, and is within 7 or 8 fms. of engine-shaft; they hope to communicate in six weeks or two months, which will enable them to remove their top lift of pumps, and be otherwise of great benefit to the mine.

EAST WHEAL RUSSELL.—William Mesherell, Sept. 4: The 66 is looking as last reported, carrying a leader of grey ore, mundic, and iron, 3 to 4 in. wide, under the flookan. We have not taken down any of the lode which carries the ore in the 55, east of Homersham's shaft, this week, as the men are desuing that part of the lode. We have stopped the cross-cut driving north-west of Homersham's shaft. Homersham's shaft is sunk about 16 ft. below the 55. We cannot report anything of the lode as the shaft is sinking on the south part of the horse. The 88 is looking just the same as when we resumed driving; we have not had time to prove the leader which carries the ore.

ESGAIR MWYN.—S. Vial, Aug. 30: In the 65, east of engine-shaft, the ground has become easier for driving, worth from 6 to 8 cwts. of ore per fm.; judging from the dip of ground we are now getting under, the part where the lode was poor in the level above, we may expect something better before long. The stope in back of 55, east of rise, will yield 9 cwts. of ore per fm. The stope west of rise, in same level, will yield 12 cwts. of ore per fm. In the 40, east of shaft, water is issuing from the lode, the end having been quite dry for the last 12 fms. until now. The stope in west end of the winze, below the 25, will yield 12 cwts. per fm. In driving under the "Hospital," in the 25, the ground is rather hard and spare for driving, and very poor. I think the trial we have made sufficient, and shall, after further advice, remove the men to resume the driving of the cross-cut south to the 20. The stope in back of the 25, east of Morris's rise, will yield ½ ton of ore per fm.—At Esgair Ddu, the lode is from 5 to 6 ft. wide, composed of clay-slate, quartz, carbonate of lead, &c. A good deal of water is issuing from all parts of the end, and a more promising lode, without ore, cannot be seen.

EXMOUTH CONSOLS.—G. C. Stewart, Sept. 3: The adit level is now in upwards of 20 fms. from the tail, leaving about 6 fms. more to reach No. 2 lode. We have cut Nos. 3 and 4 lodes about 19 fms. in, and have driven on the course of No. 3 about 4 fms., which has yielded about 4 tons of ore per fm. of excellent quality; and from their appearance and underlay, I deem it pretty certain that a large deposit of ore will be found in this place; we continue driving on this lode at 31s. 6d. per fathom. We have stopped the stopes east of the shaft, on No. 2 lode, till the adit is up, as the water is in again, from the recent heavy rains; besides, we can raise ore more easily in other places. On No. 1 lode we have done but little during the past ten days, as we have been making a road from the adit to the floors to draw the ore over; it, however, looks very promising. With regard to the ground laid open on Nos. 3 and 4 lodes, behind the ore house, we have proved these lodes on the surface to be productive for more than 50 fms. long, and in different places they show fine bunches of ore. Seeing these lodes looking so well, I attempted to find out the level of the former workers, in order to ascertain if it had been driven far enough south to cut these lodes. I discovered their level on Friday last, and yesterday got into it, but it is only up about 4 fathoms, and in the end of it there is a lode, say Nos. 6 or 7, about 8 in. wide; but the water and head in the end prevented me from completely exploring it; still, I feel sure, from the relative position and run of these lodes west, that they will be easily reached by a short cross-cut when the deep adit level is up, and driven on No. 2 lode. The dressing-floors are now sufficiently advanced to wash and dress a large quantity of ore per week, if the market is open for it, and we only want Messrs. Evans and Co.'s. order to go on delivering their 50 tons, and complete the same by Sept. 30. We think it would now be desirable to finish and furnish the smith's shop on the mine, so as to get our ironwork done there, and thus save a considerable extra expense.—P.S. We have to-day found a second adit of the old workers, which appears to be driven on a lode about 9 feet further north than that above mentioned, but being nearly full of water, I could not ascertain its size and value.

FEE DONALD.—J. Muffett, Sept. 1: The branch of ore in sinking under level B is still equal in value to last report, and worth fully 1½ ton of good quality ore per fm. In driving the end through this place we only just saw the top of this branch of ore in the bottom of the level. We have now sunk about 3 feet, and about 16 feet in length, I am glad to say there is a good branch of ore in the bottom, also in each end of the sinking so far, and looking very promising.

FRANK MILLS.—J. P. Nicholls, Sept. 3: The engine-shaft is sunk 11 fms. under the 60; the ground is much more favourable than it has been. The 60 south, on east lode, is worth 15 cwts. of lead per fm.; the gossan has quite left the end, and at present a kindlier lode cannot be seen, embedded in soft congenial ground. The 60 north, on west lode, is worth from 3 to 4 cwts. of lead per fm. There has been but little done in the 60 south on west lode during the past fortnight, in consequence of the air being bad; the stopes in the back of this level, south of the rise, are worth 10 cwts. of lead per fm. Chamberlyn's stopes, north of cross-cut, are at present less productive, having got up to the gossan. Key's stopes, north of winze, are worth 5 cwts. of lead per fm. The air throughout the mine is better to-day than it has been for the past three week. The water-wheel is now working the jigging-sieves, and answers exceedingly well.

GAWTON.—J. Hambly, J. Tretheway, Aug. 26: The rise in the back of the 24 to the 12 is not yet holed, but we are expecting to do so every hour; this, when completed, will give us good air to the 24. The winze sinking in the bottom of the 24 is going down in the killas on the wall of the lode, and after the winze is holed to the rise below we shall then take down the lode; by this way of working we shall be enabled to get the winze through much quicker than by sinking on the lode, and ventilate the 36, and enable us to work on the lode. In the rise in the back of the 36, against the winze, the progress is slow, in consequence of the foulness of the air, which we hope will soon be relieved or improved when the 24 rise is holed to the 12. The cross-cut south, in the 36, is progressing favourably. We have commenced dressing the ore on the floors at surface.

GELLIRHEIRON.—J. Jones, Aug. 30: The stopes in Bonsall's level still yield a good supply of ore. The stopes in Francis's level are in an orey lode, which is getting bigger, and I think likely to lead to better ore ground. The stope in Francis's level, east and west of Richards's rise, is in a nice looking lode, but is not very productive of ore. There is an increase of water in the rise from Francis's towards Bonsall's level, with a lode mixed with spar and gossan for a foot in width. We have been this week crushing and jigging the large heap of waste which the old workers left at Bonsall's level. The jigging-hatches will be filled to night, and will be taken upon Monday: from the appearance of the jigged stuff, it seems to turn out a good deal of ore. We hope to get at the upper waste heaps next week.

GREAT SOUTH TOLGUS.—John Daw, Sept. 2: The lode in the 70 is very much improved; it is 1½ ft. wide, worth 25*l.* per fm.; it has also drained the 60, and is letting out the water in bottom of the level. The lode in the winze sinking below this level is 2 ft. wide, worth 40*l.* per fm. We are progressing very well with the new engine, and hope to get it to work in three weeks.

GREAT WHEAL ALFRED.—M. W. Michell, W. Beaglehole, W. Arthur, Aug. 30: The lode in the 180 fm. level, east of Painter's shaft, is 2½ ft. wide, composed of killas, spar, &c.; in the same level west the lode is 2 ft. wide, worth 25*l.* per fathom. The lode in the 170, west of Copper House shaft, is 5 ft. wide, worth 7*l.* per fathom. Copper House shaft is now complete to the 170 for drawing from that level. The lode in the 160 is 2 ft. wide, worth 60 per fm. We purpose sinking a winze below the latter level in a few days, in a fine course of ore, worth upwards of 50*l.* per fm. In the 148, west of the latter shaft, the lode is very much improved, worth 10*l.* per fathom; this end is evidently, from the character of the ore, bordering on the next course of ore, now in the 160. The south lode, in the 157, is 2 ft. wide, worth 10*l.* per fathom. Nothing new in the eastern part of the mine since last report.

GREAT WHEAL BADDERN.—J. Jenkin, Sept. 2: At the eastern engine-... we have no alteration since we sunk through the flookan. The rise in the 61 ... progressing satisfactorily to communicate to the level above; the water is great... creasing, the ground is easier, and more congenial for lead. In the stopes in the ... tom of the 51, east of the winze, the lode is equally as good as when last reported... the 51 west the lode is 1½ ft. wide, producing good work for lead; in the branch... hind the end, driving north of east, the lode is rather poor at present. The lo... the 30 end east is about 6 in. wide, producing good lead ore. There is no ma... alteration to notice in any other part of the mine.

GREAT WHEAL BUSY.—MONTHLY REPORT.—J. Offord, J. B. Pascoe, Aug. ... The large engine-house and stack have been completed since last report. Two ... boilers are in, and the flue of the third about to be commenced. Both sides of the ... are heaved on the wall, and the men are about to heave in the cylinder and bottom ... with. The capstan engine has been set to work, for the purpose of raising the ... part of the large engine; it works very well, and is of great service to the mine. ... shall find it increasingly so when we come to heave in the pitwork. The stamping-... gine-house is up to the height of the bob wall, and will be ready as soon as req... The excavations for the balance-bob of the main engine-shaft are finished, and the ... in course of building. All the masonry and engineering have thus far progressed ... factorily, and without hindrance or serious accident. The men working at Hallenb... have been obliged to suspend their tribute operations for want of air, and are el... the adit to effect ventilation. The County adit is cleared 150 fms. beyond Black ... shaft, passing under boundary shaft to Rosewall's shaft; the latter, which is a good ... well-placed shaft, is now cleared up and collared. The adit is now cleared into ... Wheal Chance, and is advancing towards the Old Hallenbeagle ground. Some ... drances have been found in the zigzag adit, which have required much persevering ... to be overcome. A fortnight more will make this a sound level, affording a clear ... for all the water requiring to be pumped through the County adit. This zigzag l... an ingenious subterranean labyrinth, the object of its various windings being per... inexplicable: 4 fms. have been lost in depth between the County adit and the ... shaft. The engine-shaft is cleared and made good to the adit level, ready for the ... work. Owing to the loss of levels, the surface of water is 4 fms. below, and the ma... preparing ground for bearers and cistern plat, to take the plunger-lift to supply ... ing and condensing water. The shaft has been sounded, and found to be clear for ... below the adit—a very important fact. We hope to be able to filter the mine wa... as to use it without injury to the boilers. We have resumed the clearing of the ... or drainage adit from shop-shaft to engine-shaft—an operation immediately nece... to be completed before winter, as there is at least a square mile of loose surface r... to be drained by it, and all the minor drains are directed to it.

GREAT WHEAL VOR.—Crease's shaftmen have been cutting bearer holes, ... ting in bearers, dropped the lift to the 166 fm. level, and cleared the shaft of ... timbered, cased, and divided the shaft to the 164, put in a sollar in that level, ... down the plunger-bottom to the 164, and balance and angle-bob to the 144, and ... the same. Trelawny's shaftmen have been dividing and easing the shaft to the ... fixed ladder road and plat sollars in the 124, 133, and 144 fm. levels, put in ti... and secured the ground over the 154 plat.—Main Lode: No. 81. The stope in ba... the 90, east of Highbarrow, is worth 18*l.* per fm. Nos. 82 and 83. The stopes ... bottom of the 90, east of ditto, is worth 20*l.* per fm. No. 117. In the stope in ... the 90, west of No. 81 stope, the lode is worth 14*l.* per fm. No. 114. In the sto... bottom of ditto, east of ditto, the lode is worth 18*l.* per fm. No. 118. The sto... bottom of the 90, east of ditto, are worth 15*l.* per fm.—Trueman's Lode: No. ... the 30, east of Culma shaft, the lode is worth 25*l.* per fm.—Wheal Metal: In No. ... gine-shaft the lode is worth 15*l.* per fm. No. 94. In the 80, west of engine-sha... lode is worth 53*l.* per fm. No. 95. In the 80, east of engine-shaft, the lode is ... 15*l.* per fm. No. 70. In the stope in back of the 70 west the lode is worth 30*l.* ... No. 123. In rising and stoping in back of the 80 west the lode is worth 40*l.* per ... Schneider's Lode: No. 122. In the 80, west of cross-cut, the lode is worth 80*l.* ... No. 102. In the 70, east of cross-cut, the lode is worth 120*l.* per fm. No. 103. ... 70, west of cross-cut, the lode is worth 11*l.* per fm. No. 116. The average ... the stopes east and west of cross-cut, over the 70, is 100*l.* per fm. The tribute p... are looking well, and yielding a fair quantity of tinstuff.

HAWKMOOR.—J. Richards, P. Fisher, Aug. 30: At the eastern shaft no a... tion has taken place; the water from the south lode is very troublesome. ... Miners' shaft the lode has not all been taken down this week, but we have good ... of ore on the hanging wall, and the lode seems opening out as we sink. In ... west, driving from the eastern shaft towards Old Miners', it is 2½ ft. wide, 18 ... which is good work. At West Hawkmoor, the adit end is in granite, as befo... ported, and we anticipate good results when we meet with the next lode, as w... be 30 fms. under the old workings.

HERWARD UNITED.—J. Lightoller, Sept. 4: The pitches at Henblas ... looking quite so well as they have of late. The ground over the 50, on Grat... vein, is yielding about 1 ton of ore per fm. At Wepre shaft, judging from the ... and small strings of ore met with, we hope to cut the vein seen in the 50, in a fe... more sinking. We are making all the progress we can with Batters's engine-...

HINGSTON DOWN CONSOLS.—W. Richards, Sept. 3: The lode in Morris's ... is 4 ft. wide, producing occasionally good stones of ore. The lode in Doidge's ... is from 3 to 4 feet wide, impregnated with ore throughout, but at present ... value. The lode in the 85, east of Doidge's winze, is 3½ feet wide, producing ... stones ore, but not sufficient to value. The lode in the 55 east is 3 feet wi... worth about 1 ton of ore per fathom. We weighed on Friday last July ores, 18... 7 cwts. 2 qrs., and sampled August ores, computed 153 tons of average quali...

HOLMBUSH.—In the 145 west, on the Holmbush lode, the end is yielding ... of ore per fathom, worth 8*l.* per ton. In the end driving north in this leve... water is issuing, which is an indication that the lode is near. The lode is ... east is in a very congenial stratum for copper ore; the lode continues to ... 2 tons of ore per fathom, worth 10*l.* per ton. The lode in the rise in the back ... is not producing so much ore as at last report; it will now yield 1 ton of ore p... worth 9*l.* per ton. The stope in the back of this level is producing from 1 to ... per fathom, worth 9*l.* per ton. In the 132, west of the lead lode, the lode is ... improving, and will produce 1 ton of ore per fathom, worth 7*l.* per ton. In t... in the back of this level the lode has not been taken down. The stopes in th... of this level will yield 2 tons of ore per fathom, worth 8*l.* per ton. In the w... bottom of this level the lode is for the present disordered, being divided into ... The 122, west of Wall's, continues to produce 1 ton per fm., worth 7*l.* per to... the cross-cuts north and south, in the 160, a fair progress is being made.

KESWICK.—R. B. Shepherd, Aug. 30: The lode in the Salt level drift w... duce 6 cwts. of ore per fm. In the 30 fm. level north, No. 1 stope is worth 10... No. 2, 12 cwts.; and No. 3, 12 cwts. of ore per fm. In the 30 south, No. 1 ... worth 12 cwts., and No. 2, 10 cwts. of ore per fm. In the 40 fm. level, nort... the lode will yield 6 cwts., and the stope, in same level, 15 cwts. of ore per ... the 40 south, No. 1 stope is worth 6 cwts., and No. 2 stope 16 cwts. of ore per ...

LADY BERTHA.—W. Goss, Sept 4: The following is our setting for ... Moyle's shaft, to sink under the 10, by six miners and three labourers, limited ... certain for 60*l.*; these 5 fms. will bring us down 10 fms. 3 feet below the l... lode is now the size of the shaft, and yet we have no south wall, which is the ... part of the lode. Goss's engine-shaft, to sink by four men, limited to cut the ... 30s. per fathom, the shaft to be 11 feet long and 6 feet wide; this shaft is ... east of Moyle's shaft, and very near the centre of the sett, and where a wate... can easily be erected at some future day for the purpose of draining the mi... lode here is 6 feet wide, composed of gossan, peach, prian, and mundic, wi... of copper ore, a finer lode at surface cannot be seen. Branche's stope, in the ... of the 10, by four men, limited the month, at 4*l.* 15s. per fathom; the lode is ... 2 tons of ore per fathom, and promising further improvement. Colwill's stope ... bottom of the 10, by four men, for the month, at 4*l.* 15s., the lode worth 1... ore per fm. Westlake's stope, in bottom of the 10, by four men, limited the ... at 4*l.* per fm., the lode is worth 3 tons of ore per fathom. The 10, to drive ... four men, 3 fathoms stent, at 4*l.* 15s.; in this end, east of cross-course, we ... two branches east, producing good stones of ore, so much so that I thought t... southerly one to be the main part of the lode, but having again opened up ... at surface, east of cross-course, where it is from 8 to 10 feet wide, produci... stones of ore, gossan, &c.—in fact, the most promising place I have seen in ... opened up, so that I am again driving south, both in the adit and 10 fm. level ... fully satisfied as to the results when this part of the lode is cut. All the fill... landing of the stuff for the month limited to two men, at 4*l.* 10 per month. ... progress I have no doubt but great improvements will be the result in th... The machinery being all newly erected, and surface labour much reduced, the ... diture of the mine will be much less.

LAXEY MINES (ISLE OF MAN).—R. Rowe, Aug. 28: I was at North ... Mine yesterday. Since my last report the shaft has not gone down over 3 ft., ... take down some loose ground on the lying or foot wall of the shaft over head, w... first seemed firm and secure enough to stand. The lode in the bottom is improv... when I saw it last: there is a good branch of lead mixed in a beautiful gossa... end of the shaft, but not so good in the middle; the lode is about 2½ feet wide, ... adit level, driving south, the lode is crossed by a hard range of spar, &c., coming ... the west, and has for the time squeezed the lode, as well as disordering it, to abo... big; it has lead in the bottom of the end, however, and in the last 3 fathoms driv... have left capital ore in the bottom. Driving north since my last, the lode, as I ... improved very much, being about 3 ft. wide, and a good rib of ore in the bottom ... end (not reaching up above 2 ft.) varying from 8 to 10 inches wide; it had fallen ... ever, yesterday. A soft joint or string crossed the end, and the rib of ore as I s... the other side of the joint, was not above 2 inches thick, but solid. We are qu... stone, cutting out wheel case, carting lime and sand, and getting parts of the w... the mine, all being urged forward as fast as possible before the heavy rains ... which we have already some.

MOLLAND.—T. Bennett, Sept. 3: The lode in the 20 east is 1 ft. wide, pro... saving work, worth 6*l.* per fm.: a slide has made its appearance from the nor... will, to all appearance, heave the lode in course of driving; set to two men ... 4*l.* In the 5 east the lode is 2 ft. wide, worth about 5*l.* per fm.; set to four m... at 4*l.* 5s., and to rise 1 fm. at 4*l.* I have taken four men from the 20 to sink ... below the adit, who are cutting ground, &c., preparatory to sinking the sa... soon as the 5 fm. level is in, which will take a few days more to accomplish, ... endeavour to rise against the winze, and hole it as soon as possible. All the ... has been set for one month at 5*l.* I hope by Wednesday next we shall have ... of ore dressed.

NANTEOS AND PENRHIW.—M. Barbery, Sept. 1: In the 10 fm. level, ... east of Penrhiw, the lode is looking well, and yielding about ¾ ton of ore per ... Grovenor's winze, sinking below the adit for fear of water, we have not yet ... the lode. In the deep adit, driving east towards Bwlch Gwyn, the lode is ... more promising, and is producing some good stones of ore. In the Eystonvi... adit, driving east of cross-cut, the lode is at present unproductive. As yet w... not holed the 26 fm. level, driving east of Penrhiw to the big pitch or high ... but we expect to do so in a day or two. Our pitches, &c., are as usual ... a fair quantity of ore, and we think to sample again this day week 20 tons of ...

NETHER HEARTH.—W. Jeffrey, Aug. 29: The bottom level end, drivin... in plat, is at present poor; No. 1 stope, over this level, is worth for ore 15 cw... fm.; No. 2, 20 cwts.; No. 3, 25 cwts.; and No. 4, 15 cwts. of ore per fa... this week a good discovery has been made; the plat in which the ore is found i... 2½ tons per fm. The lodging-house has been covered in, and will in a short ... ready for the men. The weather during the week has been very much against ... millwrights getting forward with the crushing and stamping mills, but shal... have fine weather next week they will be both completed.

NEW CARREG-HOVA.—Capt. Lester, Sept. 3: During the last two days ... in the north level is not so wide, yet it is producing good lumps of copper. ... of the south level, where two men are at work, and also the upper level wor... two men, are producing a good quantity of copper. By the appearance of the ... in the new cross level, we are not far off from a vein. Two gentlemen were h... week, and examined the stones upon the hill, who expressed it as their opin... there was a deal of white lead in them.

NORTH BASSET.—T. Glanville, Sept. 3: The lode in the 72 is yielding 4 tons of ... ore per fm. In the winze sinking below the 62 the lode is yielding

fathom. In the 42 the lode is yielding 4 tons of ore per fm. The other parts of the mine are without alteration.

NORTH BULLER.—J. Vivian, Aug. 29: The engine-shaft is sunk 11 fms. 1 ft. 10 in. below the 50 fm. level, the lode in which is about 1 ft. wide, composed of capel, mundic, blende, and stones of copper ore. Our progress at Wheal Uny has been impeded, occasioned by necessary changes of pitwork, which is expected to be in good order in about three weeks, when we hope to push this end with greater dispatch than hitherto; the ground continues favourable for driving, and letting out pretty much water. In driving the 50 cross-cut south, we have lately met with small veins of blende; the ground has improved, and we shall shortly lay open the remaining space between this and East Basset. The rock at the trial shaft has become more compact, but no appearance yet of granite; the present depth is 17 fms. 1 ft. 5 in. from surface.

NORTH DOWNS.—J. Prince, Aug. 30: Prince's engine-shaft has been sunk 2½ ft. this week, and we have cut through Towan's cross-course, which is about 4 ft. wide, with good ground, both to the east and west of it, but the cross-course itself is hard quartz, and it is now in about the middle of the shaft, and as its underlay is but little it will not be lost sight of until we reach the 30. No dropper or branch has yet been discovered to the west of the cross-course, but that to the east of it, and contiguous thereto, is now split into two parts, and they appear to turn their underlay southernly; they are, however, in so close a connection with the cross vein, and the space opened upon them being so trifling, it would not perhaps be prudent to come to a decided opinion upon them before they are seen further east, but this shall be done as soon as possible, because, if they should prove to be the lode or parts of it, it will be necessary to sink the shaft on the true dip or underlay. We have commenced driving the 20 east, the lode in which is 2½ feet wide, with a good branch of ore 2 feet high from the bottom of the end, producing ½ ton of ore per fm., of good quality: we have a stope in a piece of ground left behind the end, which will produce about the same quantity of ore. The north lode, in the 10, east of Bennett's shaft, is 1 ft. wide, with stones of ore. The lode in the rise behind the end is falling back south in rising, or, in other words, underlying north instead of south; and we purpose cutting in south next week. The south lode in the end in this level is at present small, consisting of flookan and slate—ground soft. This is the character of the lode, and it will open again shortly. There is nothing now in the cross-cut west. At Peever's, we are breaking some good tinwork.

NORTH FRANCES.—P. Hosking, Aug. 30: I have set Eales's shaft to sink by nine men, 1 fm., and a plat to cut, 12 ft. long, 9 ft. wide, and 8 ft. high, at 28l. per bargain. Mackean's shaft, to sink by nine men, 2 fms., and a penthouse to put in, ground to cut for bearer and cistern, and remove lift, at 42l. for the job. The winze under the 42 is set to six men, 5 fms. or the month, at 6l. 10s. per fm. The 54, west of Mackeen's shaft, to six men, 6 fms. or the month, at 5l. per fm. The 54 east to three men and three boys, 4 fms. or the month, at 5l. 10s. per fm. The winze is still looking well, lode worth 25l. per fm. The levels east and west in the 54 are looking very kindly for ore.

NORTH TAMAR.—J. Hodge, Sept. 3: The adit end is progressing favourably, it is now extended 32 fms.; the lode is much the same as last reported, is about 1 foot wide, producing a quantity of mundic, prian, and quartz, very promising for making lead soon. We intend to sink a few pits in the wheat field, in order to see the general appearance of the lode here, when this is done you shall be duly advised.

NORTH WHEAL TRELAWNY.—H. Hodge, H. Harvey, Sept. 3: The lode in the 46, north of the shaft, is 3 ft. wide, producing 4 cwts. of lead per fm.; in the same level south it is 2½ ft. wide, producing 6 cwts. of lead per fm., in soft elvan, which is very congenial for lead. The lode in the 36, north of the shaft, is 2 ft. wide, producing 4 cwts. of lead per fm. At Magor's shaft the cross-cut is extended west 9 fms., and is extended east 6 fms.

NORTH WHEAL WREY CONSOLS.—J. Tree, Sept. 4: Since my report of last week the lode in the bottom of the whim-shaft has considerably improved, and is now worth 1 ton of silver-lead ore per fathom, and from its appearance a further improvement is daily expected in sinking, the lode presenting every indication of a good course of ore. I have had a stone assayed which was broken from the bottom of the shaft, and it gives a produce of 14¾ in 20 for lead, and 35¾ ozs. of fine silver to the ton.

NORTH WREY AND JULIA.—J. Hodge, Sept. 4: The works at this mine are progressing satisfactorily both in sinking and driving. In the adit end north, towards shaft, the lodes at the several points are as in former reports. I will report more fully in my next.

OOLA.—C. Crase, Sept. 3: We can break lead in both shafts, but not enough to pay the cost of the mine, as it is too near the surface. The lode we have been cutting down in the engine-shaft is 6 ft. wide, and as kindly a looking lode as could be seen in any shaft sunk to this shallow depth. There is every prospect that, with good management, this mine will become profitable; it has not been looking so well for some time past; and I have no doubt in sinking the shaft proposed large returns of of ore will be raised.

PEDN-AN-DREA.—J. Delbridge, J. Carpenter, Aug. 30: In the 80, east of engine-shaft, on Martin's lode, the lode is small, and at present poor; the granite is rather hard in this end. In the stopes in the back of this end the lode is yielding a large quantity of tinstuff, worth 12l. per fm. In the 80 stopes, east of engine-shaft, the lode is worth 8l. per fm. The 80 rise, west of engine-shaft, on Martin's lode, is yielding a little tin. In the 68 stopes, in the great deposit, the lode is worth 30l. per fm. The 55 stopes, on north lode and branches, are worth 12l. per fm. The 55 stopes, on the engine lode are worth 10l. per fm. The 55 stopes, west of the cross-course, on Martin's lode, are worth 3l. per fm. The 60 west, on Martin's lode, is worth 15l. per fathom. The 60 stopes, on same lode, are worth 50l. per fm. The 60 rise, on same lode, are worth 6l. per fm. In the 30, west of Skimmer's shaft, the tribute pitches are yielding the usual quantity of stuff, and the produces are without change. On the whole, our prospects are improved since last week's report. Our surface expenditure is lessened considerably; cart hire not so much as of late, nor will the surface labour be so high for the future. We are making every preparation for the guides in the sump whim-shaft, and the tinstuff is trammed over the Devoran Railway to the stamps, which are working very well. The calciner is in perfect order, and the next sale will exceed any former, both in tonnage and amount.

PEMBROKE AND EAST CRINNIS.—J. Dale, C. J. Truran, Sept. 2: We are progressing with the 162 cross-cut towards the Pembroke lode after the rate of about 6 feet per week. The 112, 108, 80, and 70 fathom levels' cross-cuts are being driven through ground of very favourable character. In the 70 ends, east and west, no lode taken down for the past week. No alteration to notice in any other part of the mine since the last report.

PENDEEN CONSOLS.—W. Eddy, Sept. 2: In the 54 we are driving a cross-cut west from our shaft-plat, to cut our western lode. We had in the 42 fm. level 4 fms. to cut the lode, and about 4 fms. to the 30. I am hoping we shall not have so far to our 54 or bottom level; we are in about 2 fms., and I expect we shall cut the lode this month. I sincerely hope it will be a good one. The adventurers richly deserve something good, and I hope they will be well remunerated for their patience. In the 42 north the lode is just the same—about 2 ft. wide, with good stones of gray copper throughout; a very small feeder would make it a rich lode. In the 30 north, on the eastern lode, we are now 25 fms. north of the shaft. The lode has now the appearance of heaving fast on the western lode; and there is a change of ground. I hope we are getting nearer the intersection of both lodes. I am expecting to cut two important points this month.

PENHAUGER.—T. Grenfell: The engine-shaft is sunk 3 fms. 4 ft. below the adit. The lode at present is about perpendicular; it is 14 in. wide, composed of fluor-spar, gossan, with good faces of lead ore, and phosphate of lead—on the whole, presenting a most promising appearance.

PONTERWYD.—J. Hughes, August 30: In the 22 fm. level, driving west at the engine-shaft, the lode is composed of blende, spar, and carbonate of lime; the appearance of it altogether is very promising, and the water continues to flow very fast out of the ground, which is a good sign of lead being near us. The rise in the eastern adit level improves; the lode is strong, containing very good stones of lead; we expect to open some excellent ground here soon. We have also two men proving the back of a lode to the north of the one we are driving on at the western engine-shaft. The lode is looking well.

PRINCE ALBERT CONSOLS.—R. Davies, Aug. 30: We are still driving west of cross-course: I prefer driving this way for the present. Since I wrote you last, the lode has greatly improved in appearance—the leader part of it is much larger; and from the indications, I believe we shall soon meet with a good lode.

RITTON CASTLE.—D. Thomas, Sept. 1: We have come to a fine vein of ore immediately over the point of intersection, and worth quite 1 ton of fine quality lead per fm. This ore extends west, and the sole of the old level contains large vughs, which have been filled up with refuse, and which will now be immediately opened by driving our 25 under.

— Sept. 4: We are going on raising ore from over the 25, and it looks quite as well as it did. Now that the mine is so fully ventilated, I am able to explore the old workings thoroughly, and have thereby discovered (yesterday) another pitch going east of the Bog shaft, which will make from 8 to 10 cwts. of ore per fathom.

SITHNEY WHEAL BULLER.—The north engine-shaft will be sunk in the course of the next month to the 80, after which the cutting of a plat will be commenced, and when completed, cross-cut to the lode. The 70 west of shaft is at present unproductive, still the appearance of the lode is favourable. The lode recently met with in the 60 cross-cut south is in a disordered state; it is not possible to say at present what will be the result when opened on a few fms. The 50 east of the cross-cut, on the south lode, still continues to produce some good work for tin. The carpenters are getting on with the horse-whim for the south shaft, and there will be no delay in getting it sunk.

SORTRIDGE AND BEDFORD.—T. Treweeke, Sept. 3: There has been sunk at the new shaft 3 fms. below the 40 fm. level, on the course of the copper lode, which is at present 5 ft. wide, composed of mundic, quartz, peach, and flookan, with good stones of copper ore on the north wall. In the adit the lode is without alteration; the lode is 2 ft. wide.

SORTRIDGE CONSOLS.—J. Richards, Sept. 4: Hitchins's engine-shaft is down 6 fms. below the 50; the lode is yielding good stones of ore, and as yet no north wall reached.—At Hitchins's shaft, in the 50 west the lode is still of the same promising character, composed of capel, mundic in abundance, prian, quartz, and a little ore of good quality. In the 50 east, and to the east of the cross-course, the lode is from 2 to 3 feet wide, worth ½ ton of ore per fm., and is promising improvement. In the 50 cross-cut south no lode has yet been met with; the ground continues easy for driving. In 40 west nothing has been done, the men having been engaged securing ground in back of 40 east. In Williams's stope, in back of the 40 east, the lode is worth 5 tons of ore per fm. There is no alteration in any other part of the mine.

SOUTH BEDFORD CONSOLS.—J. Phillips, jun., Sept. 3: The lode in the 62 west is 4 ft. wide, producing a little saving work. In the 49 west the lode is 2 feet wide, producing 2 tons of ore per fm.; the winze sinking in the bottom of this level is worth 1½ ton of ore per fm. The lode in the Red Whim-shaft is worth 1½ ton of ore per fm. In the 36 west the lode is 2 ft. wide, producing saving work.

SOUTH CARN BREA.—T. Glanville, Sept. 3: In driving west of the flat-rod shaft, the branch in the lode is 5 in. wide, of rich grey and black ore, worth 15l. per fm.

SOUTH CRENVER.—J. Delbridge, E. Chegwin, Sept. 1: The engine-shaft is sunk as deep as the back of the rise above the 84; we have about 3½ to 4 fms. to cut down to the bottom of the level. In the 84 east the lode is 20 in. wide, yielding stones of ore and mundic. In the 74, east of Gore's, the lode is 1 foot wide, but disordered by a cross-branch; the ground in this end is favourable. In the 64 east the lode is unproductive. In the rise above the 64 the lode is yielding 1½ ton of copper ore per fm. In the 54 winze the lode is yielding 1½ ton of copper ore per fm. In the 44 west we have commenced to drive to meet the intersection of the two parts of the lode. Our tribute throughout the mine is without change to notice.

SOUTH CUDDRA.—S. Truran, Sept. 2: We are endeavouring to get the shaft completed to the 40 with all speed, and hope to do so in about two months. The 20 is being driven through a run of soft ground, and we are obliged to timber it; the lode is composed of gossan and good stones of ore. The large gossan lode cut in the adit is extended 5 fms.; we are not taking down all the lode, as we want to push on and communicate with the 20 end as soon as possible, which we shall do in three or four weeks. This will give perfect ventilation throughout the mine, and throw great light on the lode. The shallow stopes are becoming exhausted, but the stoping in the back of the 30 is yielding good ore.

SOUTH DOLCOATH AND CARNARTHEN CONSOLS.—Wm. Roberts, Sept. 2: In the 70 west the lode is 3 ft. wide, kindly, with occasional stones of ore. The cutting of the plat, and fixing tramroad in the 50, will be completed about the end of this week. The 50, driving west towards the cross-course, is progressing favourably, and the tribute pitch in back of the 50 is looking well.

SOUTH TOLGUS.—The lode in Michell's engine-shaft, sinking under the 100, is 1 ft. wide, yielding 2 tons of ore per fm. (for length of shaft, 15 ft.), and is kindly to improve. The ground in the 100, and also in the 78 cross-cuts, driving south of Michell's, is moderately easy for spending. The lode in the 100, driving west of Michell's, on Youren's lode, is 2½ ft. wide, yielding 3 tons of ore per fm. The lode in the 90, driving east of Michell's, on the south lode, is 2 ft. wide, producing 1½ ton of ore per fm. The lode in the 90, driving west of Michell's, on Youren's lode, is 18 in. wide, yielding good stones of ore, and promising in appearance. The lode in the 78, driving west of Michell's, on Youren's lode, is 2½ ft. wide, producing 3 tons of ore per fm. The lode in the 66, driving west of Michell's, is 18 in. wide, yielding 1 ton of ore per fm. We have suspended the 45 from Rod's shaft, and the rise in the back of the 42, east of Michell's, and have put those two pares of men to rise in the back of the 78, west of Michell's, on Youren's lode, and we have also put a pare of men to sink a winze in the bottom of the 90, west of Michell's, on Youren's lode. The lode in Morcom's engine-shaft, sinking below the 40, is 2 ft. wide, unproductive. The lode in the 40, driving east and west from Morcom's, is about 10 in. wide, but poor. The lode in the 30, driving east of Morcom's, is 1 ft. wide, unproductive. The 30, west of Morcom's, has been driven home to the cross-course within about 6 ft., and suspended. The lode in the 20, driving west of Morcom's, on south branch, is 1 ft. wide, unproductive. In the 10, driving west of Morcom's, the lode is 15 in. wide, yielding 1 ton of ore per fm.—Aug. 30.

ST. AUSTELL CONSOLS.—R. H. Williams, Aug. 30: At Dowson's shaft, the 35 cross-cut north is troublesome for driving, the ground is still hard; however, the object before us should urge us on. The end east, on a bunch, is set to drive at 75s. per fm. The cross-cut south is set to drive at 70s. per fm. In the present end we have cut a stream of water, letting out from four to six gallons of water per minute; this I consider is not a bad feature, and indicates a change of some sort at hand. The end east, on the course of the lode, is very encouraging for mineral; it is rather troublesome to drive at present, but this I hope will not be of long continuance. Our stopes and backs are yielding their usual quantity of tinstuff. In a rise going up through the first south splice we have some good stones of tin; it will all pay for turning over. To-day, I set a tin pitch at Young's shaft, at 6s. 8d. in 1l., and 3s., for copper ore. We have, also, in this part of the mine, a pitch at 5s. for tin and copper. In the 15, at Dowson's, the winze sinking to ventilate the 25 east is down about 4 fms.; in about six or eight weeks we hope to hole this winze to the 25 end. The lode in the 15 looks large, and contains a quantity of mundic; we shall now commence to develop the lode on its course. I consider the general appearances of the mine are satisfactory. By the cutting of any of our north or south lodes in the 35, we have a right to expect a fair increase on the returns.

TAMAR SILVER-LEAD.—T. Foot, Sept. 2: The lode in the end in the 215 is 2 ft. wide, producing 9 cwts. of lead ore per fm.; two stopes in the back of this level will yield on an average 9 cwts. per fm. We are progressing with the 205 end as fast as possible, and also the end driving north from Jackman's winze, to meet the 205 end. The stopes in the back of this level are worth 7 cwts. per fm. The lode in the end in the 190 is 2 feet wide, producing 7 cwts. per fm. Three stopes in the back of this level are yielding as follows:—No. 1. 10 cwts.; No. 2, 8 cwts.; and No. 3, 7 cwts., of ore be fm. The stopes in the back of the 175 are worth 6 cwts. per fm. Two stopes in the back of the 160 are producing 6 cwts. of ore per fm. Nothing new in any other part of the mine since last reported on.

TRELEIGH CONSOLS.—J. Prince, Aug. 30: The ground at Carr's engine-shaft is not so favourable for sinking as it was last week, and hence our progress has not been so good; sunk 1½ ft. We have done nothing on the caunter lode in this week's working, but resumed driving west on the main lode, which is about 1 foot wide, yielding ½ ton of good quality ore per fathom; two days ago the principal part reached two-thirds up the end, and it would then produce about 1 ton of ore per fm., but at present it does not come up more than two-thirds from the bottom; the indications, however, are very favourable, especially for the next level. At Nicholson's, the lode in the shaft is hard, large, and very troublesome for sinking, but we hope that this will improve next week, as the ground appears to be altering by the side of the lode. The lode in the 10 east is 2 feet wide, producing a small quantity of both copper and tin ores, but nothing to save. As the air is not very good in this end, we removed two of the men to open on the lode in the western end, where it is enlarging, and producing good stones of yellow copper ore. The stopes in the bottom of the winze so far has not proved satisfactory; we shall go back for another stope, in order to break through another floor, to ascertain whether tin or copper will be produced. Bunchy ground is usually found at so shallow a depth, but I am convinced, from the indications before us, and from the ore raised, that the lode will yet produce large quantities of ore.

TREWETHA.—T. Richards, W. Rowe, Sept. 2: The 60 fm. level, north from the engine-shaft, is worth 9l. per fm., and south from shaft 8l. per fm. The 50 north is worth 7l. per fm. The 40 north, 5l. per fm. The stopes are producing their average quantities of ore. In the 50, on the eastern lode, there is no change; the south end is producing 3 cwts. of ore per fm., and the north end 2½ cwts. per fm.; in both of these ends the lode is of the most promising character, and very easy of progress. The slime frames continue to answer well.

VALE OF TOWY.—S. Thomas, T. Harvey, S. Harper, Sept. 2: At Clay's engine-shaft, sinking under the 40, we calculate on the ground being something better than for some time past. In the 40, driving north, the lode is 2 ft. wide, producing 10 cwts. of lead per fm. In the same level, driving south of Field's shaft, the whole breadth of the end, 3½ ft. wide, is composed of barytes and gossan. At Bonville's shaft, sinking under the 30, the ground is somewhat hard. In the 30, driving north of said shaft, the lode is disordered and split into branches, mixed with lead, but not sufficient to value. In the winze sinking under the same level, south of Field's shaft, the lode is large and unproductive. In the 20, driving south, the lode is 1½ ft. wide, producing a small quantity of lead. In the same level, driving east of Bonville's shaft, we have cut no lode as yet. We sampled on Saturday last, computed 85 tons of lead, and set to work at surface a new balance-bob, which assists the engine very much, and effects a great saving in coals, &c.

WELSH POTOSI.—R. Dunn, T. Goldsworthy, Sept. 2: At Esgair-hir, No. 3 stope, back of adit, yields 1 ton of lead ore per fm. The stope in bottom of footway shaft yields 1½ ton of ore per fm. No. 5 stope, in back of the 10, west of footway shaft, yields 1 ton of ore per fm. No 6. stope, in back of same level, yields 1½ ton of ore per fm. No. 7 yields 1½ ton of ore per fm. No. 8, in the back of the 10, west of old engine-shaft, is worth 1 ton of ore per fm. At No. 1 winze, in the 10, west of footway-shaft, the lode is not taken down this week, nor in No. 2, west of old engine-shaft. At Esgair-ffraith, the pitches in the back of adit, east and west of Bog shaft, are without alteration to notice. At Middleton Mines, the lode in the shallow adit level, Llwynnadda, is without alteration; the ore holds good. The incline is completed within a few fms. to the lower crusher, and will be in operation in a few days.

WEST BASSET.—W. Roberts, Sept. 2: The engine-shaft sinking under the 104 is progressing favourably; the lode is 3 ft. wide, poducing good stones of ore. In the 104 west the lode is 2 feet wide, worth about 1 ton of ore per fm.; in the 94 east the lode is 3 feet wide, producing 2 tons per fm. The 42 east produces 1 ton per fm. In the 94 east, on the caunter, the lode is 1½ foot wide, worth 1 ton per fm. In the 42 west, on south lode, the lode is 1½ foot wide, gossan and ore, tribute ground. The stopes and pitches continue to look well.

WEST COLLACOMBE.—H. Rodda, Sept. 4: At Bridgman's engine-shaft, the lode in the stopes at back of the 52 east is full 18 in. wide, composed of capel, jack, and copper ore, producing 10 cwts. of the latter per fm. The lode in the rise at back of the 42 east, is worth 6l. per fm. for copper ore. In the winze sinking below the 27 the lode is producing good dressing work for copper ore. The sinking of the new eastern shaft is progressing very satisfactorily, it being now down 10 fms. below the surface, and the ground still favourable for sinking. The engine, flat-rods, and all other appendages connected therewith, are working exceedingly well. There is no alteration in any other part of the mine.

WEST PAR.—J. Webb, Sept. 3: We have just intersected a lode in the east cross-cut, but have not cut through it as yet, the ground being wet, and slow to cut into; however, we are taking out some rich copper ore, and the water issuing from the lode contains much copper in solution. It is premature to say much about this discovery, but I am persuaded it will lead to something important. The 45 end, driving west, appears to be only passing through the gossan of the lode, and just touching over the tops of the shoots of mineral; if we get a little copper ore in driving this level, we find it does not continue to hold up in the back, but the last 45 fms. driving is through a very promising lode for making much copper in depth. With this inducement we are driving on the 65 fm. level with all speed, but the distance from the engine-shaft being great causes a long cross-cut; therefore, it will require some months to intersect the lode in the 65. Our prospects, on the whole, are encouraging. The mine is now well ventilated.

WEST SHARP TOR.—Wm. Richards, Sept. 1: In the 90 east, during the past week, we have met with a cross-branch 4 in. wide, and underlying west, containing crystallised iron and quartz; the ground to the east of which is materially improved for driving—so much so that the price is reduced from 8l. to 2l. 10s. per fm. The air here has, however, become foul and rarefied; we shall, therefore, commence at once to prepare a little machine to work by the engine, to convey more and better air, which when completed will facilitate the driving. The ground at Morris's engine-shaft is now chiefly elvan, of a favourable description, and contains numerous small branches of quartz, interspersed with yellow, grey, and black copper ore, with faces and good pieces of native copper between the joints.

WEST SORTRIDGE CONSOLS.—J. Pryor, Sept. 3: There is no material alteration to notice this week.

WHEAL AGAR.—W. Roberts, Sept. 2: In the 40, driving east of Winstow shaft, the lode is 3 ft. wide; same level, west of ditto, the lode is 2 ft. wide, each producing good stones of ore. In the 40, west of boundary shaft, the lode continues 2 feet wide, worth 2 tons of ore per fm. Other operations are progressing favourably.

WHEAL ARTHUR.—Thos. Carpenter, Sept. 1: On old lode, the lode in Palmer's stope, in back of the 20 east, is 6 feet wide, worth 12l. per fm. for tin; this stope is working by four men at 2l. 10s. per fm., 5 fms. stent.—Watson's Lode: The lode in the 20 west, below adit, is 3 feet wide, good stamps work for tin; this end is driving by two men, at 7l. per fm., 2 fms. stent. The lode in Wilton's stope, in back of the 30 from surface, is 4 ft. wide, worth 10l. per fm. for tin; this stope is working by two men, at 12s. 6d. per fm., 10 fms. stent.—North Lode: The lode in the 20, below adit, is 4 feet wide, yielding stones of copper ore; this level is driving by four men, at 9l. per fm., 2 fms. stent. We have cut through the cross-course in the 10 west, under adit, and commenced driving north to cut the lode, which I expect is hove about 2 fms.; this level is set to drive by six men, at 7l. per fm., 2 fms. stent, or cut the lode. The lode in the adit end west is 5 feet wide, worth 8l. per fm.; driving by four men, at 9l. per fm., 2 fms. stent. The lode in Ivey's stope, in back of the 35 west, is 4 feet wide, worth 15l. per fm.; stoping by four men, at 2l. per fm., 5 fms. stent. The lode in the 20 west is 2 ft. wide, composed of spar, capel, mundic, and spots of copper ore; driving by six men, at 5l. per fm., one month stent. The lode in the adit level east, at eastern mine, is 5 ft. wide, composed of capel and spots of copper ore; driving by four men, at 6l. per fm., 2 fms. stent. We weighed at Calstock Quay, on Aug. 29, July ore 103 tons 5 cwts., and sampled August ore, computed 80 tons.

WHEAL CREBOR.—J. Gifford, Sept. 3: In the 66 fm. level, east of Rundle's engine-shaft, we are driving on the north part of the lode, which is about 2 ft. wide, composed chiefly of a dark coloured capel, with a branch of white iron on the north wall, 3 in. wide, intermixed with lead and copper ore, which shows a more promising appearance than I have hitherto seen it before. We have discontinued to stope the back of the 66, west of shaft, on tutwork, and set it on tribute, by two men, at 14s. in 1l. In the 12 fm. level, west of shaft, the lode is 2½ ft. wide, composed of capels, peach, mundic, iron, and spots of copper ore. At the trial shaft, on the north lode, there is no alteration to notice. The same may be said of the adit level on one of the north lodes.

WHEAL EDWARD.—T. Carpenter, M. H. East, Sept. 2: North Lode: The lode in the 64 east is 5 feet wide, composed of spar, capel, mundic, and copper ore; this end is driving by six men, at 7l. per fm., 2 fms. stent. We have cut the cross-course in the 54 east, which is 2 feet wide; we expect it is heaved a few feet south, as it is in the level above. We have set this level to drive south by four men, at 3l. 10s. per fm.; 1 fm. stent, or cut the lode. The lode in the 41 east is 2 feet wide, composed of spar, mundic, gossan, and copper ore, driving by four men, at 5l. 10s. per fathom, 1 month stent. We have suspended the 64 and 54 west until we communicate the 41 with Arthur's 20, which will be in about two months.

WHEAL EXMOUTH.—N. Faull, Sept. 3: The plat in the 60 fm. level is completed, and are about to commence the cross-cut to the lode. In the 40 north, no lode taken down for the last week; the 40 south is worth about ¼ ton lead ore per fm. The 30 north is producing about 1 ton per fm.; the stopes at this level vary from ½ ton to 2½ tons per fm. The winze sinking under the 20 north is producing 2 tons of ore per fm., and improving. Our tribute department is much as it has been for some time. The water-wheel at the dressing-floors is at work, and answers admirably.

WHEAL GRENVILLE.—G. R. Odgers, Aug. 30: The granite in the 70 fm. level cross-cut, north of the main lode, is of a very good character, there being patches of white quartz, intermixed with a quantity of water flowing from the end, which looks promising to be approaching a lode. In the 40, west of Taylor's, there is no change since my last advice. The lode at Newton's engine-shaft continues to produce good stones of ore, but having taken down but very little since my report on Wednesday, there is no alteration to notice. The lode in the eastern end in the 30 is fully 2 feet wide, composed of quartz, gossan, and prian, with spots of ore and mundic; in the western end, same level, the lode is not quite so large, of much the same description.

WHEAL HENDER.—E. Blewett, Aug. 27: The engine-shaft is sunk below the adit 5 fms., lode worth about 4l. per fm. In the winze sinking below the adit, west of engine-shaft, the lode is worth 10l. per fm. In the adit end east the lode is 1 foot wide, poor at present. The north and south lodes are just the same as last reported.

WHEAL KITTY (ST. AGNES).—W. Thomas, Aug. 30: At the engine-shaft, sinking under the 62 fm. level, the lode is 18 in. wide, worth 30l. per fm. At Holgate's shaft, sinking under the 65, the lode is 3 ft. wide, worth 15l. per fathom. In the 65, driving west of Holgate's shaft, the lode is 3 ft. wide, worth 20l. per fm. In the 54, driving west of Holgate's shaft, the lode is 2 ft. wide, worth 25l. per fm. In the 34, driving east of the 34 cross-cut, on the new lode, the lode is 2½ ft. wide, worth 7l. per fm. for tin and copper. In the 62, driving east of engine-shaft, the lode is 2 feet wide, worth 5l. per fm. In the 54, driving east of engine-shaft, the lode is much the same as last reported. In the rise over the 54, east of engine-shaft, the lode is small and unproductive. In the 44 fathom level, east of engine-shaft, the lode is 5 feet wide, worth 8l. per fm. In the 34, driving east of Sunny Corner shaft, the lode is 2 ft. wide, worth 6l. per fm. Our tribute department continues to look well.

WHEAL LANGFORD.—W. Knott, Aug. 30: The clearing of the 35 has been extended as far east as Malachy's shaft, and is now in course of clearing; it will take about a week from this time to accomplish this, when we shall commence breaking ore from the back of the 35. The sinking of the engine-shaft was resumed immediately on the forking of the water. The size and quality of the lode in the bottom continues much the same as reported before. The stope in the back of the 24 will yield at present about 1 ton of copper ore per fm., and 2 cwts. of lead ore. We have not been able to dress the whole of the lead ore on the mines, in consequence of being short of dressing water, the engine requiring the whole of the water to supply it while forking from the old mine. The quantity of copper ore sampled at Calstock yesterday is computed 24 tons, but called in the ticketing paper 25 tons. The parcel of lead ore will be ready for sampling in four or five days.

WHEAL MAUDLIN.—W. Tregay, Aug. 30: The adit level at Coombe measured 5 fms. 2 ft. driven, and lobby 7 fms.; adit set again to drive by four men, at 40s. per fm., 5 fathoms stent. The lode here is small but very regular, chiefly of gossan and prian; the costeaning in same measured 52 fms. 3 ft. The trial shaft in No. 973 field measured 2 fms. 2 feet. 6 in. sunk; set again to sink by four men, at 40s. per fathom, 2 fathoms stent. The lode here is about 2 feet wide, composed of quartz and gossan, with spots of ore; the costeaning here measured 16 fms. The trial shaft at Woodland-lane measured 8 fms. 0 ft. 9 in., but nothing is set there again.

WHEAL NELSON.—W. C. Vivian, Sept. 2: The lode in the 60 fm. level, east of the engine-shaft cross-cut, is 1 ft. wide, unproductive. In the rise in the back of the 60 the lode is large, letting down a large quantity of water. In the 44 west the lode is producing good stones of yellow copper ore. In the same level east the lode is producing tinstuff of moderate quality, accompanied with a little grey copper ore. The lode in the 32 east is small and unproductive.

WHEAL TEHIDY.—D. Lanksbury, Sept. 3: No change of importance has taken place in the mine since last reported. In the 90, driving west, the lode has a more favourable appearance, and I think a bunch of ore is not far distant.

WHEAL TRELAWNY.—J. Prince, Sept. 2: Smith's shaftmen are engaged in cutting the trip plat in the 132, which work will be completed shortly, to resume driving the cross-cut towards the lode, and whilst this is being done, an angle-bob will be fixed in the 108, and the necessary pitwork below, to enable us to commence sinking the shaft below the 132. The lode in the 120 north is about 1 foot wide, consisting of fluor-spar, spotted with lead, and worth 8l. per fathom. In the same level south the lode is small, but it contains lead to the value of 6l. per fm. In the 108 north, the lode from Chippendale's shaft looks well in the extreme, and it is 2½ feet wide, and worth 12l. per fm. In the same level south the lode is 2 feet wide, and worth 12l. per fm. The lode in the 98 north traverses a disordered, distorted slate, it is, therefore, small, hard, and poor. The ground in this level appears to be a flaw, because in the level below quite a different kind of rock is to be seen on both sides of the lode. The lode in the south end is 2 feet wide, consisting mostly of fluor-spar and lead ore, with hard hornstone on the upper wall, and is worth 10l. per fathom.—South Mine: Trelawny's shaftmen are engaged in dividing and casing the engine-shaft from the 130 to the 142, when finished the south end will be resumed driving. The lode in the 130 south is 2 feet wide, worth 10l. per fathom. In the same level north the lode is large, and very hard, composed of veins of fluor-spar, with hard runners of hornstone; the spar, however, contains a little lead and mundic. The lode in the 120 south is 2 feet wide, and worth 10l. per fm. The stopes and pitches are producing about the same quantity of lead as they did last month. We sampled on Friday last 80 tons of lead ore of good quality, and to be sold on the mine on Saturday next, the 6th inst.

— W. Jenkin, W. Bryant, Sept. 4: Smith's shaftmen are still engaged in cutting plat in the 132. In the 120, north of Smith's shaft, the lode is 1 ft. wide, worth 8l. per fm.; in the same level south it is 2 ft. wide, worth 6l. per fm. In the 108 south it is 2 ft. wide, worth 13l. per fm.; in the 98 south is 2 ft. wide, worth 10l. per fm.; in the 108, north of Chippendale's, it is 2½ ft. wide, worth 12l. per fm.; in the 98 north it is 1 ft. wide, worth 5l. per fm.—South Mine: Trelawny's shaftmen are engaged in cutting a plat in the 142. In the 130, south of Trelawny's shaft, the lode is 2 ft. wide, worth 10l. per fm.; in the same level north it is 2 ft. wide, composed of fluor-spar, mundic, and spots of lead ore; in the 120 south it is 2 ft. wide, worth 10l. per fm. The stopes and pitches are producing much as usual. We sampled on Friday last 80 tons, computed, of crop ore, which will be sold on the 6th inst.

WHEAL TREMAYNE.—R. Williams, H. Rogers, Aug. 30: At the boundary engine-shaft in the 113, on Allen's branches, the branches are yielding low-price tinstuff. In the 103, east of Allen's shaft, on Allen's branches, the branches are more sparry, being now worth 7l. per fm.; the stopes in back of same level, east and west of shaft, are worth 10l. per fm.; in the cross-cut south of the same level, on the course of flookan towards the engine lode, the ground being favourable we expect to cut the lode in the course of the month. The stopes in the bottom of the 70, east of the same shaft, on Allen's branch, are worth 10l. per fm. The stope in back of the 53, east of the same shaft, on Allen's branches, is yielding its usual quantity of low-price tinstuff. At the new engine-shaft, on the south lode, the stope in back of the 70, west of shaft, is yielding low-price tinstuff. In the 70, west of Field's shaft, on the same lode, towards Wheal Margaret, there is no change to notice since last report. In the 55, east of Wheal Margaret shaft, on the same lode, the lode is 1 ft. wide, chiefly composed of flookan and spar; in the winze sinking under the same level, 10 fms. east of shaft, the lode is 20 in. wide, yielding 1 ton of copper ore per fm. At Mably shaft, on the same lode, sinking under the adit level, the ground is much the same as for some time past. The stopes in back of the 70, east of flat-rod shaft, on the same lode, are worth 6l. per fathom.

WHEAL WREY CONSOLS.—P. Clymo, jun., W. Hancock, R. Roskilly, Sept. 3: The engine-shaft is sunk 8 fms. 1 ft. under the 44 fm. level. The lode in the 44 north is 3 ft. wide, producing 12 cwts. of lead per fm.; in the same level south it is 2 feet wide, producing ½ ton of lead per fm. In the 33 north it is 3 feet wide, producing ¾ ton of lead per fm.; in the same level south it is 2 feet wide, producing 6 cwts. of lead per fm. In the 23 north it is 1 foot wide, producing good stones of lead. The north shaft is sunk 3 fms. under the 12 fm. level. The stopes are producing much as usual. We sold, on Aug. 25, a parcel of lead ore, computed 78 tons, at 19l. 3s. 6d. per ton, to Messrs. Newton, Keates, and Co.

WHEAL ZION.—J. T. Phillips, Sept. 3: The lode in the 65 west is from 2 to 3 ft. wide, producing a large quantity of mundic, a strong-looking lode; in the eastern end the lode is letting out a great deal of water, without any further improvement. In the 50 east, which is 20 fms. before the 65, we have a kindly-looking lode about 4 ft. wide, composed of spar, peach, and mundic, with the flookan on the north side or footwall, producing stones of yellow copper ore. In the 40 west the lode is large, with small branches of copper ore in the south part, a kindly-looking lode; the ground is of a very congenial character. We sampled 53 tons of ore on Aug. 29 of fair produce.

WOOD.—S. Cock, Sept. 3: There is no material change since my last. The shaftmen are engaged in cutting plat in the 14 fm. level. The lode in the winze is improved a little; ground as last reported.

WAGES IN SCOTLAND.—At the British Association, Dr. Strang adverted to the wages of two of the most important industries of the west of Scotland—the rates obtained by the workmen employed in mines and iron-works, whose numbers in the year 1854-55 amounted to 31,900, and whose united wages during these twelve months reached the large sum of 1,976,000l. Average rate of mining labour for the last five years:—

From January, 1852, till October, 1852, inclusive	2s. 6d.	per day.
From November, 1852, till January, 1853, inclusive	3s. 0d.	"
From February, 1853, till August, 1853, inclusive	3s. 6d.	"
From September, 1853, till October, 1853, inclusive	4s. 0d.	"
From November, 1853, till December, 1853, inclusive	4s. 6d.	"
From January, 1854, till January, 1855, inclusive	5s. 0d.	"
From February, 1855, till September, 1855, inclusive	4s. 0d.	"
From October, 1855, till March, 1856, inclusive	5s. 0d.	"
From April, 1856, till August, 1856, inclusive	4s. 0d.	"

Average rate of wages paid to workmen connected with the manufacture of pig and malleable iron:—

	1852.	1853.	1854.	1855.	1856.
Blast furnace keepers, per day	5s. 0d.	6s. 3d.	6s. 8d.	6s. 8d.	7s. 9d.
Ditto assistants, per day	3s. 2d.	3s. 7d.	4s. 2d.	4s. 2d.	4s. 9d.
Ditto fillers	2s. 8d.	3s. 4d.	3s. 10d.	3s. 9d.	4s. 2d.
Puddlers, includ. under hands	7s. 6d.	10s. 3d.	10s. 6d.	10s. 0d.	10s. 0d.
Rollers (chief rollers)	10s. 0d.	14s. 0d.	14s. 6d.	13s. 6d.	13s. 6d.
Labourers	1s. 6d.	1s. 10d.	2s. 1d.	2s. 0d.	2s. 0d.

From the foregoing statements, it appears that there has been a gradual but important rise in the wages of those employed in the coal and ironstone mines, as well as of those employed in the manufacture of pig and malleable iron. In the former, from 2s. 6d. a day, in October, 1852, to 5s. in March last; and in the latter of from 25 to 50 per cent. on the wages paid to the labourers connected with the working of the blast furnaces and the rolling and puddling of iron since 1852. And when the number of men connected with these several industries is remembered, being nearly 34,000, such a rise cannot fail to involve most important consequences.

A GOOD FINDING.—A party of three miners, working in the Back Creek, at Tarradale, at a depth of about 12 feet from the surface, came upon a solid lump of gold, weighing 54 lbs., with about 80 ozs. of smaller nuggets in close proximity. The total value taken from the claim was a little under 3000l.—*Melbourne Argus*, June 9.

MINING NOTABILIA.

[EXTRACTS FROM OUR CORRESPONDENCE.]

THE ST. AUSTELL DISTRICT.—The state of mining in this locality is not quite so healthy as one would like to see it; notwithstanding, there are some encouraging features yet to be found, and such as are likely to lead to important results. And if they be merited at all in any locality it is in this; for when we take into account the enormous outlay, and the comparative small returns, we cannot help expressing a hope that the proprietors will ere long reap a bountiful harvest.

WEST FOWEY is fast approaching a dividend state.

PAR CONSOLS holds out its usually good indications, and the probability of further increased dividends.

PEMBROKE AND EAST CRINNIS is now being tested by the driving of cross-cuts in the deeper levels, which it is to be hoped will prove equal to the expectations of the shareholders. But, in addition to this, the shafts should be deepened, so as to get into mineral-bearing strata. For example; examine the working plan of its rich neighbour, Par Consols, when much light might be thrown upon the subject. It is to be feared there is not sufficient investigation of the collateral evidence in localities by the mining captains, whereby they might be enabled to found their opinions upon facts and scientific research, rather than upon the bare possibility of random guesses.

SOUTH CRINNIS is making a little headway.

WEST CRINNIS will doubtless rise when the Regent property is fully worked in conjunction with it, as proposed, and for which every inducement is held out.

SOUTH CUDDRA is a promising bit of property, but, strictly speaking, it should form part of the last-mentioned, and even then it would only be a fair sized sett, and the result might be good.

GREAT CRINNIS.—The bottom of this mine will soon be reached, and its state be fully ascertained. So far there is ground for reasonable and profitable results, as the appearances of the change of strata both in the 90 east and west of the engine-shaft, as also the improved state of the 80 from Union shaft, on the Old Crinnis lode, will warrant. The agents are very sanguine. It would be a wise course to deepen both shafts. The mine, as a whole, is decidedly improved. I will now pass on to the tin locality of this district, and merely notice the—

UNION TIN MINE.—Here I find a beautiful and powerful steam-engine, adapted and employed for pumping and stamping purposes, under able superintendence, with easy ground, whereby shafts are sunk and levels driven with rapidity. A vast amount of tin ground is laid open, and still increasing, which is of the first quality. This is destined to become an early dividend-paying mine. The capital being small, the tin good, ground easy, and charges light, the profits should be corresponding.

The success of the East Wheal Rose Mine formerly induced parties to take up and work setts in the neighbourhood with great avidity, and with variable results. The appearances at the Pencorse Consols are very favourable; these mines now returning 80 to 100 tons of jack per month, besides parcels of copper and lead, has caused a great stir in the neighbourhood. All the setts west have been secured, and now the land north of these promising mines has been granted, operations on which will be immediately commenced, under the name of Goon-hosking Mines. It is supposed several east and west lodes traverse this sett, parallel to Pencorse great lode, from which hundreds of tons have been sold in the last few years. The north and south lode of these mines must cross the sett, and the prosecution of the Goon-hosking Mines will be of immense advantage to the Pencorse adventurers, as well as to the entire neighbourhood. The sett is entirely untried, and we shall therefore be anxious to watch its gradual development.

DEVON KAPUNDA COPPER MINE.—The shareholders in this adventure are now likely to realise their long anticipations of a good result of this valuable property, and be amply rewarded for their patience, perseverance, and large outlay. By reference to a report read at the meeting of shareholders, on Wednesday, from Capt. James Richards, the superintendent of Devon Great Consols, and periodical inspector of this mine, in another part of the Journal, it will be seen they have come upon a lode 3 ft. wide, worth 15*l.* to 20*l.* per fm., and believe they are close upon a rich deposit of copper. This company was brought out three years ago, in 6000 shares, at 3*l.* 10*s.* per share; the 6000 shares are now reduced to 1800, and in the holding of 12 individuals, men of business, honour, and respectability, who have, since it came into their possession, prosecuted with vigour the development of the undertaking. The proprietors have been fortunate in obtaining as trustees to the property Messrs. W. S. Potter and A. W. Lamb, gentlemen of that standing and respectability which give to the shareholders a sure guarantee for the future effective and economical working of this now promising adventure.

NORTH WHEAL WREY CONSOLS.—At this mine a most splendid lode of silver-lead ores has been met with in sinking the shaft. I was at the mine yesterday, and was highly pleased to see the rich-looking stuff they were bringing up from the bottom of the shaft. Judging from the opinion of a highly respectable agent who has inspected it, it is likely to be one of the leading mines in the Liskeard district.

WHEAL FRIENDSHIP (ST. HILARY).—On a recent visit to the Marazion district this mine appeared to be in a prosperous condition, and under the able superintendence of a good practical miner, with a full stock of machinery. Mr. R. C. Manuel, we are informed, laboured hard to obtain the requisite funds for its effectual development, and that under difficult circumstances.

SORTRIDGE CONSOLS.—An improvement has taken place in the 50 fm. level, east of the cross-course, in the above mine. There is every probability of the same rich course of ore being met with in driving east in this level as was seen in the 40 fm. level above.

DEVON BORRODALE MINES.—The recent improvements of Mr. Bessemer, in converting iron into steel, with the remarkable discovery of the new metal, aluminum, has called forth the attention of the mining world to the plumbago, or black lead, hitherto produced in Cumberland. The fact of this mineral realising such an enormous price has caused other nations to send their produce to the English market; although inferior in quality, yet it commands a ready sale. Mineralogists have for many years endeavoured to discover similar deposits of this rare and valuable article, but without success, until the operations of the Devon Borrodale and Exmouth Consols, in the neighbourhood of Bridford, the produce of which will materially affect the market value; it being of a similar description as used to mix with the rich ore of Borrodale, Cumberland; and when viewed in connection with the ore of this mine, which realises the enormous price of 3360*l.* per ton (being next in importance to gold and silver), it is fair to presume upon its intrinsic value being ascertained, to realise a proportionate price. This property (the Devon Borrodale) has been visited by a deputation from London, accompanied by a gentleman from Bristol, largely connected in the iron trade, who was much gratified to see this newly-discovered lode, which, at a depth of 3 fms., will yield upwards of 5 tons of rich ore per fm.; three other lodes are running parallel within 20 fms., and have been traced upwards of a mile in length. The lodes have also been inspected by an influential firm in Manchester, who have offered to contract for all the produce of the Devon Borrodale ore.

THE IRON TRADE.—The following is a weekly report, to September 2, forwarded to us from Glasgow by Mr. Thomas Edington, showing the principal contracts for rails, castings, and machinery, known by him to be in the Iron Markets of Great Britain and Ireland:—

NEW CONTRACTS.

4000 tons rails, 1500 tons chairs, 200 tons fishing-plates, and 160 tons bolts and spikes, for the Scinde Railway.
600 tons rails, and 130 tons chairs, for Perth.
100 tons rails, 300 earth wagons, and a locomotive engine, for London.
2160 yards water-pipes, gas holder, &c, for the North-Eastern Railway.
A steam-engine, boilers, &c., for Torquay.
120 wagons, for the Newcastle and Carlisle Railway.
Large malleable iron girders, for the Newcastle-on-Tyne Music Hall.
Iron railings, gates, &c., for Leeds.

Mr. John Batters has furnished the following remarks on the Commercial and Mining business of the week, ending Friday night:—

The markets have presented a drooping appearance all the week; the disturbing causes have been the continued firmness of the money market, the drain of gold for the Continent, and the failure of the Royal British Bank. To-day a rather better feeling has prevailed, and the impression is that for the present the markets have seen their worst. The fine weather, good crops, and general soundness of trade, must have an influence on securities generally, and the present affords a favourable opportunity for investors. Consols, after touching 94¾, to-day have rallied to 94⅞ to 95. In foreign stocks, we have no change to notice. Turks, 103⅛–¾; New ditto, 103¾–⅞.

Prices of railway shares were unfavourably affected by the settlement, but have since partially recovered; North British, is an exception, having risen from 37 to 41, on the announcement of a 2½ per cent. dividend. London and North-Western, 103½ to 104; Great Western, 64½ to 65; South Western, 53 to 53¼; Midland, 80¼ to 80⅜; Leeds, 97¼ to 97⅜; Caledonian, 26 to 26¼; Dover, 21⅜ to 21¾; York and North, 28½ to 29; Berwick, 20 to 20¼; Eastern Counties, 9 to 9¼; Luxembourgs, 5; Northern of France, 40¼ to 40⅜.

Banks and miscellaneous stocks continue to absorb a large share of the public attention. The National Discount Company at the present price appears a most desirable investment, and cannot fail to obtain a large advance, they leave off to night—National Discount Company, Old, ⅞ to 1 prem.; ditto, New, ⅝ to 1 prem.; Bank of Egypt, ¼ dis. to par.; Omnibus Company, ¼ dis. to par.

In foreign mines, market very quiet. United Mexican have not maintained the late rise, and leave off, 3⅞ to 4; Fort Bowen, 2s. 6d. to 3s.; Cocaes, 3¾ to 4; Imperial Brazilian, 2¾ to 3⅛; Cobre, 51 to 52; St. John del Rey, 22.

Dividend British Mines still improve, and we have to report a large business during the week. After a careful analysis, British mining stocks stand pre-eminent, in comparison with almost every class of securities, showing near 15 per cent. per annum on outlay, after taking every class of worthless property and misspent money into account; it is, therefore, not to be wondered at that we should now see a re-action to the late heavy depression on this description of stock. Alfred Consols, 13 to 13½; Brynford Hall, 115 to 120; Devon Consols, 402½ to 405; Mary Ann, 36 to 37; North Basset, 36 to 36½; Ding Dong, 41 to 41½; Providence, 61 to 62; Sortridge Consols, 2¾ to 3; South Frances, 355 to 365; Tincroft, 4 to 4¼; Trelawny, 21, United Mines, 90 to 100; Buller, 290 to 300; Basset, 290 to 295; Wheal Wrey, 8½; Par Consols, 20½; West Basset, 30 to 30¼.

Progressive mines are also in increased demand, with an upwards tendency, to which we see no check, many shares being still much under their intrinsic value. Botling Well, 8; Collacombe, 45 to 50; East Basset, 42½; East Russell, 15 to 20; East Rose, 16; Grambler and St. Aubyn, 45 to 50; Great Alfred, 5¼ to 5½; Lady Bertha, ¾ to ⅞; North Frances, 10½ to 11; North Robert, 30 to 31; Herward United, 40 to 45; Porkellis, 10½ to 11; West Bolton, 55; West Collacombe, 3s.; Wheal Ludcott, 32s. 6d. to 33s.; Wheal Grenville, 30s.; Wheal Zion 15s.

GOLD IN TASMANIA.—The local Government of Tasmania (Van Diemen's Land) have issued a notice that they will not for the present interfere in any way with those who desire to dig for gold, it being merely required that the name and address of the digger should be registered at the police-office of the district. The committee appointed to direct the Government grant of 2000*l.* to be expended in testing the extent and value of the Fingal gold fields, have notified that practical diggers, to the number of 100, disposed to work in the Fingal gold fields, will be supplied, free of cost, with tents, tools, and the following rations:—14 lbs. meat, 12 lbs. flour, 6 ozs. tea, 3 lbs. sugar, per man per week, on application to Mr. Robert Cox, of Fingal, the superintendent appointed by the committee. The diggers will be allowed all the gold they may find, and will also have the additional chance of obtaining the large reward (now in course of collection, and expected to amount to upwards of 10,000*l.*) offered to the discoverers of a profitable gold field in Tasmania.

*** MINING JOURNAL.—The VOLUMES for 1854 and 1855, perfect, with Index and Title-page, strongly bound, to be sold—price 2*l.* each.

The Mining Market; Prices of Metals, Ores, &c.

METAL MARKET, London, Sept. 5, 1856.

		£. s. d.
COPPER.		
Copper wire	p. lb.	0 1 1½–0 1 2
ditto tubes	„	0 1 1½–0 1 3
Sheathing and bolts	„	0 1 0– —
Bottoms	„	0 1 ½–0 1 1
Old (Exchange)	„	0 0 10½
Best selected	p. ton	110 10 0
Tough cake	„	107 10 0– —
Tile	„	107 10 0– —
South American (nom.)	„	100 0 0
IRON.		per Ton.
Bars, Welsh, in London		9 0 0– —
Ditto, to arrive		8 10 0– —
Nail rods		9 10 0– —
„ Stafford. in London		9 15 0–10 15 0
Bars ditto		9 2 6–10 10 0
Hoops ditto		10 5 0–11 10 0
Sheets, single		11 5 0–13 0 0
Pig, No. 1, in Wales		4 10 0– 5 0 0
Refined metal, ditto		5 10 0– 5 15 0
Bars, common, ditto		7 12 6– 8 0 0
Ditto, railway, ditto		7 15 0– 8 0 0
Ditto, Swed. in Lon.		14 0 0–16 10 0
in stock to arrive		15 0 0–15 10 0
Pig, No. 1, in Clyde		3 15 0– 3 16 0
Ditto, in Tyne and Tees.		3 11 0– 3 15 0
Ditto, forge		3 10 0– —
Staffordshire Forge Pig.		4 15 0– 5 0 0
Welsh Forge Pig		3 15 0– 4 0 0
LEAD.		
English Pig		23 15 0–24 10 0
Ditto sheet		24 15 0–25 10 0
Ditto red lead		26 0 0–27 0 0
Ditto white		27 0 0–30 0 0
Ditto patent shot		27 0 0–28 10 0
Spanish, in bond		23 0 0– —
American		none.
FOREIGN STEEL.		
Swedish, in kegs		19 10 0–21 0 0
„ to arrive		19 10 0–21 0 0
Ditto, in faggots		22 0 0– —
English, Spring		18 0 0–23 0 0

BRASS (sheets)	p. lb.	10d.–10½d.
Wire		10d.
Tubes		12d.–14d.
QUICKSILVER	p. lb.	1s 9d.
SPELTER.		Per Ton.
Foreign		23 15 0–25 17 6
To arrive		23 10 0– —
ZINC.		
In sheets		33 0 0– —
TIN.		
English, blocks		127 0 0– —
Ditto, Bars (in barrels)		128 0 0– —
Ditto, Refined		133 0 0– —
Banca (nom.)		127 0 0– —
Straits	„	126 0 0–128 10 0
TIN-PLATES.*		
IC Charcoal, 1st qua.	p. box.	1 17 6– —
IX Ditto 1st quality	„	2 3 0– —
IC Ditto 2d quality	„	1 14 6– 1 15 0
IX Ditto 2d quality	„	2 0 0– 2 1 0
IC Coke	„	1 10 6– 1 11 0
IX Ditto	„	1 16 6– 1 17 0
Canada plates	p. ton	15 0 0–15 5 0

In London; 20s. less at the works.

Yellow Metal Sheathing	p. lb.	10½d. —
Wetterstedt's Pat. Met.	p. cwt.	2 2 0
Stirling's Non-laminating, or Hardened, Surface Rails.	p. ton	9 0 0– 9 2 0
Stirling's Patent Toughened Pigs	Glasg.	— – 5 5 0
Ditto	Wales	4 0 0– 4 5 0
Indian Charcoal Pigs in London		— – 7 0 0
MANGANESE.†		(21 cwts.)
Ground	p. ton	6 4 0– 7 8 0
Giessen Lump	„	5 0 0– 5 5 0
Nassau ditto	„	4 5 0– 4 7 0

* At the works, 1s. to 1s. 6d. per box less.

† Four months' credit, and free on board at Rotterdam. The per centage of peroxide is about 60 for Nassau lump, 64 to 65 for Giessen, and 66 to 75 for ground.

REMARKS.—The metal market generally during the past week has been rather dull, though for some metals the demand is very good.

COPPER.—Orders for this metal are very difficult of execution, except for delivery at late dates, the smelters being full of orders; though a recovery from the late fall has been anticipated, it is not likely it will take place just yet.

IRON remains much the same as last week, the demand not being quite so active. Scotch pigs have presented no feature of interest, the prevailing feeling being dull, in the absence of speculation. The closing price for mixed numbers, 72s.; No. 1, 74s. 6d.; No. 3, 70s. 6d.; cash, against bill of lading. The holders of keg-steel demand an advance upon last week's prices.

SPELTER is decidedly looking up, holders asking 5s. to 7s. 6d. advance upon last week's quotations, and there is every probability of the price still going higher.

ZINC.—An advance of 1*l.* per ton has been announced.

TIN.—English remains firm, at the late decline, and foreign has still further advanced, the price in Holland being 74¾ fl. to 75 fl., the demand still continuing.—TIN-PLATES AND QUICKSILVER without alteration.

LIVERPOOL, SEPT. 4.—Our metal market presents but little alteration since our last report, and for the most part it is inactive. Welsh bar Iron is the only description in good demand at present, and for which an advance of 2s. 6d. per ton has been established, and still orders continue to be plentiful; this portion of the trade looks healthy, and should the demand still continue a further advance may not be considered as improbable. Staffordshire Iron, on the contrary, is dull, and the orders which are given out, judging from their comparative smallness, appear to be for the purpose of supplying pressing and immediate wants merely. There is no evident encouragement for purchasers to order largely, seeing that the depression continues, without any apparently immediate prospect of improvement, sufficient, at all events, to check the underselling which is carried on to so considerable an extent. The only exception which appears to exist is in reference to sheet Iron, for which the demand is better just now than for any other description of Staffordshire Iron. Scotch Pig-iron has suffered a decline in price during the week of 1s. per ton for mixed numbers, storekeepers' warrants, and business in the article is almost at a stand still. Iron for shipment abroad is fairly enquired for, and the shipments for the week are again large, being 14,494 tons, against 8782 tons in the corresponding week last year, or an increase of 5712 tons. The trade appears to be in a very anomalous position, for a decline in price is scarcely reconcilable with such shipments. The quantity so exported, added to that required for consumption locally, cannot but reduce the stocks in storekeepers' hands. Operators in the article appear to want confidence, and hence the scarcity of transactions, and the gradual decline in value. The Tin market maintains its firmness, and the demand is good; the Dutch deliveries are reported as being unprecedentedly large, and the remaining stock proportionately small. Tin-plates are difficult to obtain at current rates, and for some brands orders are refused altogether; there appears to be every prospect of a continuance of the demand for this article. Copper strongly maintains its position, and orders are plentiful; if any alteration in prices should take place, it will be upward. In Lead there is no alteration to notice; the demand is moderate. The following are the quotations:—Iron: Merchant bar, 8*l.* 5*s.* to 8*l.* 10*s.* per ton.—Tin: Common block, 127*l.* per ton; common bar, 128*l.*; refined block, 133*s.*—Tin-plates: Charcoal, IC, 36*s.* to 36*s.* 6*d.* per box; coke, IC, 31*s.* to 31*s.* 6*d.*—Lead: Sheet, 25*l.* per ton; pig, 24*l.* 10*s.*—Copper: Cake and tile, 107*l.* 10*s.* per ton; best selected, 110*l.* 10*s.*; sheathing and bolt, 1*s.* per lb.—Yellow metal sheathing, 10½*d.* per lb.

PARIS, SEPT. 4.—The general appearance of the metal market is favourable, the opinion of the majority of those concerned being that prices will be maintained, at least, until the end of the month. Laminated charcoal iron is quoted at 370 frs.; ditto coke, 350 frs.; and Welsh, which sells pretty freely, 340 frs.; English sheets are enquired for, at 51 to 52 frs. The market for Scotch pigs is inanimate, and follows the Glasgow market as nearly as possible, with the addition, of course, of freights and charges, the speculative transactions being extremely few in number, and of insignificant amount.

From Australia (Sydney, June 7) we learn that the contracts for the railway iron for Government were not then awarded. The market was firm for iron; sales of Staffordshire are reported at 18*l.*: there were enquiries for corrugated iron, light numbers: a sale, to arrive, had been made at 48*l.* Tin plates were scarce, and sales had been made. In lead, a sale of sheet, in good order and untrussed, was reported as high as 33*l.*, but this must be taken as an exceptional sale: there was some speculation going on both in sheet and pipe. Tin plates continued scarce: many articles of tinware are now being made there, and the consumption is, therefore, increasing.

At New York (Aug. 21), the enquiry for Scotch pig-iron was steady; the demand for Spanish pig-lead was increasing. The shipments of copper from Lake Superior, for the month of July, through the St. Mary's Falls ship canal, amounted to 1074 tons, or about 2500 barrels.

MINES.—The reaction in the mining market has been very rapid and great, whilst the demand for good dividend mines increases daily, and prices are recovering from the fall occasioned by the temporary decline in copper. South Frances shares have advanced to 365, ex div., and are in request. Mary Ann shares have reached 37 to 38; Basset, 290 to 300; Buller, 290 to 300; North Basset, in which a large business has been transacted, 36½; West Basset, 30 to 31; Trewetha, 3⅜; Gonamena, 26 to 26½; Devon Consols, 405. In Grenville, large purchases have been made, at 28s. to 31s.; in addition to ore coming into the shaft at Newton Moor, the cross-cut in the 70 fm. level north, from the south mine, appears to be approaching a lode. Trevelyan, 6; Wheal Wrey, 8 to 8¼; East Tolgus, after reaching 70 to 75, have receded to 40, 50; Uny, 4 to 4¼; Alfred Consols, 13 to 13½; South Carn Brea, 10½ to 11; Providence Mines, 60 to 61; West Frances, 20; West Stray Park, 8 to 8½; Trelawny, 22½; Rosewarne, 65; Sortridge Consols, 2¼; South Tolgus, 130, 140, 150; South Caradon in good demand, at 285 to 295; United Mines, 150; Clijah and Wentworth, 10 to 11; Kitty (Lelant), 10½ to 11½; Wheal Margaret, 42½; West Seton, 250; Dunstanville, 25; Calvadnack, 6½; Condurrow, 130; North Roskear, 85; Ding Dong, 40 to 42½; Great Alfred, 5¼ to 5½, and a large business done; Holyford, 8½ to 9; Wheal Edward, 1¾ to 2; Great South Tolgus in demand, at 8 to 8½; Wheal Nelson, 1¾.

At the South Frances meeting, held on Monday, the profit on the two months' working was 4335*l.* 5*s.*, and a dividend of 3968*l.* (8*l.* per share) was declared, leaving a balance in hand of 694*l.* 12*s.* 9*d.* The report of the mine is very favourable, and the trip plat in the 60, at Richards's shaft, being completed, the stuff will be drawn with greater speed and efficiency, and the returns increased. There are thirty-four men and four boys working ten stopes in the different levels, which are worth on an average 35*l.* per fm., and stoping at an average price of 2*l.* 7*s.* 6*d.* per fm.

North Basset is looking well, especially in the 72 and 62; the 369 tons of ore sampled last week yield on an average 15⅞ per cent. produce, and is expected to realise nearly 6000*l.* South Carn Brea has improved driving west of the flat-rod shaft, where the lode is worth 15*l.* per fm. At Great South Tolgus, the shares in which are in demand, the lode in the 70 fm. level is worth 25*l.* per fm.; the lode in the winze sinking below the 60 is worth 40*l.* per fm. Collacombe sampled 153 tons of good ore last week; the mine is looking well.

At East Hender, the engine was started on Friday evening, and went regularly to work on Saturday; when the water is in fork to the 22 fm. level, it is expected that pitches can be set in the back of the 12 fm. level. At West Stray Park, the lode is not yet cut in the 50; if cut good, there will be a rise in the shares. At East Alfred Consols, there is a very good lode 13 fms. from surface, and yielding good ore, of which 10 tons will soon be sampled.

The unfortunate destruction of the South Tamar Mines by the breaking in of the River Tamar, detailed particulars of which will be found in another column, has been the engrossing subject of conversation in mining circles, and although it has been resolved to obtain the advice of an engineer as to the practicability of stopping the hole in the bed of the river, the general opinion is that the mine is irredeemably destroyed, and the realisation of the assets the most desirable movement on the part of the shareholders. A few months since, the silver-lead ores discovered and laid open in the mine were valued at 80,000*l.*, the greater part of which is consequently lost. At the time the water broke in, 120 tons were lying broken underground, and ready to be brought to surface. On examining the accounts, it would appear that after paying the last month's cost the cash and ore bills in hand will leave 2000*l.* to the credit of the shareholders, exclusive of ores and halvans at surface, and the machinery, which consists of five steam-engines and the halves of two engines on East Tamar, timber, erections, &c., the whole of which cannot have cost the shareholders less than 20,000*l.*, but which is not likely to realise half that amount, the pitwork being entirely lost. The South Tamar Mine formed part of the old Beeralston, worked in the time of Queen Anne, and yielding very large quantities of silver. Of late years, the richest workings have been under the river. The present company was formed eight or nine years ago, in 9000 shares, at 9*s.* each, and the calls afterwards were 17*s.* 6*d.* per share, making 1*l.* 6*s.* 6*d.* per share paid up by the shareholders, or less than 10,000*l.*, whilst the mine at one period stood at a market value of 10*l.* per share, or 90,000*l.* The outlay for machinery, plant, &c., and for opening out the mine in a proper manner, has been very great indeed, and all paid out of the produce of the mine (with the exception of the small sum paid up by the shareholders, as before mentioned), and 31,950*l.* have been divided as profit amongst the adventurers, the first dividend, of 4500*l.*, having been paid in 1852; in 1853, 6750*l.*; 1854, 10,125*l.*; in 1855, 6075*l.*; and in the early part of the present year, 4500*l.* The ores of the mine were very rich for silver.

Mining Exchange Official List of transactions during the week:—

SATURDAY, AUG. 30.—Cubert United, 2*s.* to 2*s.* 6*d.*; Great Alfred, 4¾ to 5; Great Hewas, 10*s.* 6*d.* to 11*s.*; St. John del Rey, 21¾; Providence Mines, 59½ to 60½; Sortridge Consols, 2¼ to 2⅜; Trewetha, 3¼ to 3½; West Frances, 15½ to 16; Wheal Basset, 290 to 295.

MONDAY.—Gonamena, 26 to 26½; Great Alfred, 4¾ to 5; North Basset, 33½, 34, 34½; Rosewarne United, 64¼ to 65; Sortridge Consols, 2¼ to 2⅜; South Tolgus, 130, 135, 140; Trewetha, 3¼ to 3⅜; Wh. Mary Ann, 35¾, 36, 37; Wh. Uny, 4¼.

TUESDAY.—Alfred Consols, 12¾, 13, 13¼; Cubert United, 2*s.* to 2*s.* 6*d.*; North Basset, 34¾, 34, 34¾; North Frances, 11¾; Providence Mines, 60 to 61; South Frances, 360, 362½, 365; Trewetha, 3 5-16, 3¾, 3, 3*l.* 8*s.* 9*d.*; United Mexican, 4¼; West Frances, 16; West Stray Park, 8 to 8¼; Wheal Basset, 286¼, 292½, 295; Wheal Grenville, 27*s.*, 28*s.*, 29*s.*; Wh. Mary Ann, 36 to 36½; Wh. Trelawny, 22½.

WEDNESDAY.—Alfred Consols, 13, 13¼, 13⅜; Cubert United, 5*s.*; Great Alfred, 4¾, 4¾, 5; North Basset, 36 to 36½; South Carn Brea, 10½ to 10¾; St. John del Rey, 21¾ to 22½; Trewetha, 3¾ to 3*l.* 8*s.* 9*d.*; Wheal Buller, 300; Wh. Wrey, 8¼.

THURSDAY.—Devon Great Consols, 402½ to 405; Great Alfred, 5; North Basset, 36, 36¼, 36½; St. John del Rey, 22; West Basset, 30 to 30¼; Wheal Basset, 292½, 290, 292¾, 295; Wheal Buller, 295 to 300; Wheal Grenville, 29*s.*, 30*s.*, 31*s.*, 30*s.*; Wheal Mary Ann, 37*s.*; Wheal Zion, 11*s.* 6*d.* to 12*s.* 6*d.*

FRIDAY.—Alfred Consols, 13¼ to 13¾; Devon Buller, 18*s.*; Great Alfred, 5, 5¼, 5¼; North Basset, 35¾, 36, 36¼; Sortridge Consols, 2¾, 2⅝, 2*l.* 13*s.* 9*d.*; South Frances, 365 to 367½; West Frances, 20 to 20½; Buller, 290 to 292; Wheal Grenville, 30*s.* to 31*s.*; Wheal Nelson, 1½; Wheal Wrey, 8 to 8¾; Wheal Zion, 11*s.* 6*d.* to 12*s.* 6*d.*

Business reported to have been done on the Stock Exchange:—

SATURDAY, AUG. 30.—Wheal Buller, 300; Wheal Basset, 290; Alfred Consols, 13¼; Par Consols, 19½ to 20; Wheal Edward, 2; Trewetha, 3¾; Sortridge Consols, 2⅜; Providence Mines, 60½ to 61; Great Wh. Alfred, 4¾ to 4¾; St. John del Rey, 21¾.

MONDAY.—Wh. Basset, 29½ to 30; Gt. Wh. Alfred, 4¾, 4¾; Cubert United, 2*s.*

TUESDAY.—Wheal Basset, 290; South Frances, 26*s.*, with div.; North Basset, 34, 34⅜, 34¾; Wheal Mary Ann, 35 to 36; Providence Mines, 61½; Sortridge Consols, 2¼; Duke of Cornwall, 18½; West Frances, 17⅛; Trewetha, 3 5-16; E. Tamar, ¾.

WEDNESDAY.—Devon Great Consols, 395 to 398; North Basset, 35¼ to 36; West Basset, 30; Sortridge Consols, 2½; Alfred Consols, 13¼ to 13⅜; Tincroft, 4; Par Consols, 20 to 21; Garrog, 1*s.* 6*d.*

THURSDAY.—South Basset, 285 to 287½; North Basset, 35¾ to 36¼; Alfred Consols, 13¼ to 13¾; Par Consols, 20½; Porkellis, 11; Wheal Grenville, 1½.

The arrivals of ores and metals during the week are as follow:—

MONDAY.—In London, 1100 casks copper ore from Manilla, 1013 kegs copper ore from the Cape of Good Hope, 939 blocks tin from Holland, 35 casks zinc Belgium.

TUESDAY.—In London, 18 casks and 19 cases copper ore from Holland, 20 cases copper ore from Bahia, 1822 bars iron from Sweden, 30 tons copper ore and 14 hogsheads tin from Port Phillip.

WEDNESDAY.—In London, 1427 blocks tin from Holland, 1862 bars iron from Sweden, 49 casks zinc from Belgium.

THURSDAY.—In London, 4145 bars iron from Sweden, 25 pigs lead from Guatemala, 52 tons copper ore from Adelaide, 870 slabs tin from Holland, 36 barrels rolled zinc from Belgium.

FRIDAY.—In London, 1521 bars iron from Sweden, 1380 bags copper ore from Sydney, 1700 slabs tin from Holland.

At Pool Ticketing, on Thursday, 3028 tons of copper ore were sold, realising 20,119*l.* 4*s.* The particulars of the sale were—Average produce, 7¼; average standard, 129*l.* 18*s.*; average price, 6*l.* 13*s.*; quantity of fine copper, 218 tons 19 cwts. The sale at Redruth, on Thursday next, will comprise 4404 tons.

The Ticketing at Swansea, on Tuesday, comprised 2236 tons of copper ore, and produced 30,577*l.* 9*s.* 6*d.* The Cobre Mines had 621 tons, which sold for 9942*l.* 10*s.*; Berchaven, 358 tons, 3873*l.* 14*s.* 6*d.*; Garrucha, 281 tons, 1822*l.*; Kapunda, 205 tons, 7899*l.* 17*s.*; Malaga, 188 tons, 1256*l.* 11*s.*; Spanish, 475 tons, 2430*l.* 12*s.* 6*d.*; Cronebane, 94 tons, 503*l.* 19*s.* 6*d.*; Tigrony, 2 tons, 76*l.* 5*s.*; Knockmahon, 94 tons, 965*l.* 2*s.*; Castilian, 58 tons, 445*l.*; Peninsular, 49 tons, 312*l.* 7*s.* 6*d.*; French slag, 23 tons, 103*l.* 10*s.*; Preamimma, 23 tons, 396*l.* 15*s.* 6*d.*; Wheal Emma, 65 tons, 549*l.* 5*s.*—The next sale, on Sept. 16, will be of 1669 tons—from Cobre, Berchaven, Knockmahon, Namaqualand, Malaga, Holyford, Tungkillo, and Spanish.

The arrivals of gold, during the week, are 82,000 ozs. per *Kent*, from Melbourne; 4734 ozs. and 4200 sovereigns per *Walter Wood*, from Sydney. The *Retriever* is reported from Sierra Leone with 2090 ozs. of gold dust on board. The total value of the precious metal may be estimated at about 359,496*l.*

At the Isle of Man Mining Company annual meeting, held in Chester, on Thursday, a dividend of 1*l.* per share was declared, which, with previous dividends paid since the last annual meeting, is equal to 21 per cent. for the 12 months.

The Hibernian Mine Company declared a dividend of 10*s.* on Aug. 7.

At West Crinnis Mine meeting, on Wednesday (Mr. Charles Hinks in the chair), it was resolved that 5000 shares should be issued at the rate of 17 10*s.* per share; such shares to have a preferential rate of interest of 10 per cent. over the shares for a period of five years after dividends are declared, the present shareholders having the priority of claim to the allotment.

At South Wheal Ellen meeting, on Tuesday, the accounts showed—Balance last audit, 98*l.* 14*s.* 1½*d.*; cost, June, 401*l.* 5*s.*; July, 371*l.* 5*s.* 5*d.*; merchants' bills, 572*l.* 1*s.* 11*d.*; moiety of winding and crushing engine, 315*l.*=1558*l.* 6*s.* 5½*d.*—Calls received, 384*l.*; copper ore sold, less dues, 512*l.* 16*s.* 5*d.*; leaving balance against mine, 651*l.* 10*s.* 0½*d.* A call of 15*s.* per share was made. Capt. Annear reported that he should sample next week 130 tons for the two months: the last two monthly sampling was 87 tons. The report of the mine was highly satisfactory to the shareholders. About 35 fms. of ore ground are laid open on the flat lode. The shaft sinking on the engine-lode produces 2½ tons per fm.; the winze in the 20 west, 5 tons per fm.; the stopes on each side of the winze, 3½ tons per fm. The 30 end is 11 fms. from the winze. The 10 and 20 east are pushed forward with all possible expedition towards the ore ground, worked for 120 fms. in length in the adit by the old miners. The 10 is about 15 fms. from the eastern ore ground.

At South Tolgus Mine meeting, on Tuesday, the accounts for May and June showed—Balance last audit, 326*l.* 2s. 3d. ; ores sold (less dues), 2435*l.* 19s. 4d. = 2762*l.* 1s. 7d.—mine costs and merchants' bills, 2006*l.* 14s. 7d. : leaving balance in favour of adventurers, 755*l.* 7s.

At Stray Park, Camborne Vean, and Wheal Francis meeting, on Wednesday, the accounts showed—Mine cost, March to June, 1044*l.* 4s. 4d. ; merchants' bills, 805*l.* 1s. 3d. ; tribute pay, subsist, lord's dues, &c., 250*l.* 12s. 9d. ; loss in Wheal Francis, 77*l.* 9s. 7d.=2177*l.* 7s. 11d.—Ores sold, 929*l.* 4s. 7d. : leaving balance against adventurers, 1248*l.* 3s. 4d. A call at the rate of 1*l.* 7s. 2d. was made. Capts. Francis Pryor, Richard Pryor, and Edmund Rogers reported that they had 60 men on tutwork, and 20 on tribute. They were of opinion that the adventurers would be well remunerated for their outlay.

At the Devon Kapunda Mine general meeting, on Wednesday, a highly gratifying report from Captain James Richards, of Devon Great Consols, was read, showing the progress made in developing the mine since the last meeting (April 14), and the extremely encouraging prospects in view. [The report is inserted among the Mining Correspondence.]

At Ritton Castle Mine meeting (Mr. H. W. Brook in the chair), the accounts showed—Balance last account, 44*l.* 18s 11d. ; mine cost and merchants' bills, 184*l.* 12s. 5d. =229*l.* 11s. 4d.—Calls received, 221*l.* 5s. : leaving balance against mine, 8*l.* 6s. 4d. A call of 1s. per share was made.

At Treloweth Mine meeting, on Tuesday (Mr. G. H. Cole in the chair), the accounts showed—Balance from last account, 652*l.* 13s. 1d. ; labour cost for three months, 824*l.* 1s. 6d. ; merchants' bills, 674*l.* 6s. 1d. ; discount on ore bills, 9*l.* 17s. 5d.; London expenses, 30*l.*=2190*l.* 17s. 11d.—Calls made, 1250*l.* ; ores sold, 475*l.* 10s. 8d. : leaving a balance against the mine of 465*l.* 7s. 3d. It was resolved that the names of adventurers, who had not paid their calls, should be handed over to the merchants having claims on the mine. A call of 3s. per share was made.

At South Tamar Consols Mining Company meeting, on Thursday (Mr. Thomas in the chair), a resolution was passed that an engineer be appointed by the committee to examine the property, in consequence of the River Tamar breaking into the mine. A very lengthened discussion ensued, one party contending that it would be preferable to wind-up the adventure at once ; and, on the other hand, it was considered that the property ought to be examined by an engineer, in conjunction with Mr. Wolferstan. The feeling of the meeting appeared to be in cordial co-operation with the committee and Mr. Wolferstan, and an amendment was eventually carried, that a report be made to the shareholders previous to abandoning the mine. A vote of thanks to the Chairman terminated the proceedings.

At Mill Pool Mine meeting, on Aug. 26, the accounts showed—Balance from last audit, 141*l.* 2s. ; mine cost, 1191*l.* 9s. 6d. ; merchants' bills, 474*l.* 15s. 9d.= 1807*l.* 7s. 3d.—Tin sold, 1702*l.* 8s. 10d. : leaving balance against mine, 104*l.* 18s. 5d. Capts. Matthew White and William Oats, jun., reported that the engine-shaft is sunk on the Mill Pool standard lode 4½ fms. under the 76 ; the lode is 1 ft. wide, producing saving work for tin. Since the steam-stamps have been set to work, in June, 1855, they had sold 105 tons 10 cwts. of tin, and estimate the quantity now on the floors at 18 to 20 tons. The standard price paid to tributers is 50*l.* per ton.

At Wheal Ellen meeting, on Tuesday, the accounts showed a balance against adventurers of 580*l.* A call of 12s. per share was made.

At Great Sortridge Consols Mining Company meeting, on Aug. 29 (Mr. J. E. Anderdon in the chair), the accounts showed—Balance from last audit, 197*l.* 4s.; calls received, 3*l.* 15s.=200*l.* 19s.—Mine cost account, 50*l.* 16s. 3d. ; London expenses, 18*l.* 17s. 8d. ; committee fees, 10*l.* 10s. ; merchants' bills, 100*l.* : leaving balance in favour of mine, 10*l.* 10s. 1d. Messrs. Anderdon, Bayly, Harding, and Spinney, were appointed the committee of management.

At East Sortridge Consols Mining Company meeting, on Aug. 29 (Mr. J. E. Anderdon in the chair), the accounts showed—Cash last audit, 212*l.* 1s. ; calls received, 1*l.* 5s. ; discount on bills paid, 4s. 7d.=213*l.* 10s. 7d.—Mine cost, 84*l.* 2s. 5d. ; merchants' bills, 10*l.* 5s. 9d. ; London expenses, 15*l.* 15s. ; stationery, committee's fees, &c., 22*l.* 4s. 4d. : leaving balance in favour of adventurers, 81*l.* 3s. 1d. A call of 6d. per share was made. Messrs. Anderdon, Bayly, Harding, Spinney, and Rosewarne, were appointed the committee of management.

At the Rhosydd Slate Company meeting, on Tuesday (Mr. Jas. Oliver in the chair), a resolution was passed to adjourn the proceedings until Sept. 30, for the purpose of examining and auditing the accounts of Mr. Harper, the manager.

At the Consolidated Mines (Gwennap) meeting, on Aug. 29, some discussion took place respecting the agreement between the former companies at the time of their purchase of the Consols ; and it was ultimately resolved, on the motion of Mr. Field, that the Consolidated Mines should be submitted for sale by auction.

St. Austell Consols sold on Aug. 29, 1 ton 1 cwt. 1 qr. 15 lbs. of nickel and cobalt ores.

Wheal Zion has sampled 53 tons of good quality copper ore.

At South Cuddra Mine, the new lode has been extended on east 5 fms. It is expected that the junction with this and the other lode will be reached in a few days. All other points are looking well.

At West Rosewarne, the 50-in. engine has been set to work. Active underground operations will now be carried on, and from the mine adjoining the rich Rosewarne United, in the western part of which the lode is most productive, while the ore dips west, there is every reason to expect important discoveries before long. At West Rosewarne the shaft is already 29 fms. below the adit, and in the former working upwards of 500 tons of copper ore were sold ; but at that time the price of copper was only 80*l.* per ton, and ore which then fetched about 5*l.* would now realise full 7*l.* per ton.

At Ritton Castle Mine, a vein of very fine quality lead ore, worth upwards of 1 ton per fm., has been cut, 10 fms. west of Bog shaft ; and yesterday's report states that another pitch, worth from 8 to 10 cwts. per fm., has been discovered east of Bog shaft, giving nearly 15 fms. run of ore ground. This is another instance of the uncertainty of mining, as at the last general meeting, but for the recommendation of one shareholder, the mine would have been knocked, as the intersection of No. 3 lode was then known, and was poor at that point.

Wheal Friendship is looking well ; the lode is exceedingly rich.

From Boringdon Consols, 4 tons 2 cwts. of copper ore have been sold, at the very high price of 21*l.* 16s. 6d. per ton. It is the general opinion that there must be a large deposit in the immediate vicinity where this came from.

From Caroline Wheal Prosper, Capt. W. Williams (Sept. 4) reports that no change has taken place since last report, operations going on satisfactorily.

From East Frongoch, Capt. T. Pascoe (Sept. 4) reports that in the 30 east, on the south lode, there has been a great improvement ; the lode is 5 to 6 feet wide, with a good branch of lead and mundic on the south wall, from 8 to 10. wide.

Wheal Tehidy is looking well, with excellent prospects.

The mines in Montgomeryshire daily assume a more important aspect, and their development is stated to be considerably aided by the liberality shown by Sir Watkin W. Wynne to his mining tenants.

In consequence of an improvement in the mine, a large amount of business has been done in Sortridge Consols shares at 2¾, being an advance of ¼ to ⅜ on the price of yesterday.

Great South Tolgus shares are in good demand, at an advance.

Great Wheal Alfreds have been in good demand to-day, and the price has advanced to 5¼ to 5½, with an upward tendency.

The Mariquita Company have received despatches, of which the following is an abstract :—SANTA ANA MINES for June : Cost, $7404 ; returns, $11,263.—MARMATO MINES for May : Cost, $12,842; returns, $13,160.—PURIMA MINES for May: Cost, $4988 ; returns, $3787.

The United Mexican Mining Association have a despatch from Major Farrell, R.A., dated Guanaxuato, July 28, from which the following is extracted :—JESUS MARIA Y JOSE : I have stopped all works in this mine, with the exception of those in and approaching to the new shaft, to which all our efforts have been directed ; it has continued to progress most favourably, no impediment having arisen from water or the nature of the rock. Against the first due provision and precaution have been taken by means of an adit, which has been made to communicate with the shaft, and has been completed to an extent of 76 varas, cutting off and intersecting a spring and freshet of water, which would otherwise have annoyed us. I hope to announce in my next monthly report (if not before) the communication of the shaft with the level of San Juan, and the lower workings of the mine : 21 varas have been excavated this month ; total depth, 221 varas.—LA TRINIDAD : The cross-cut mentioned in the last report was driven 3¼ varas before reaching the release, and the lode then showed a width of 6 varas, the upper wall being so well marked as to preclude the necessity of continuing the cross-cut further to the westward. The frente of Dolores has advanced nearly 16 varas, and the vein is very formal and broad in it ; the pintas are favourable, and there are strips of ore of a low ley. The greatest economy is observed in working this mine consistent with a proper trial and speculation of any favourable appearances that may occur, and I am not without hope that I may soon have it in my power to announce a change for the better.—ALDANA : I have nothing special to report of this mine.—QUICKSILVER : Price $62 per quintal, cash, and $66 with six months' credit.—FINANCES : The available asset on July 26 was $1231 4, subject to liabilities. Balance in the hands of the agents in Mexico on July 31, $11,855 60.

The Port Phillip and Colonial Gold Mining Company have advices from their resident director, dated June 7 last. The operations at Black Hill were being proceeded with ; the level had been driven 54 ft. to the north, and is still going on in that direction, with a view to striking the bands which have hitherto been most productive. At Dead Horse Flat there is a strong quartz band, from 20 to 30 ft. in width, on which Mr. Robson had taken up claims. Very little work has been done on it, and should a trial of the quartz bear out the general opinion as to its value, this will be a favourable position for the company, as there would be no difficulty in keeping the crushing machinery at work night and day from the first moment of commencing operations. The *Jalawar* had arrived in Hobson's bay, with the engines, pumps, &c.

The English and Australian Copper Company have advices from their manager at Adelaide, dated May 28 last, stating that three, if not four, furnaces would be kept at work during the winter season, and no doubt sufficient copper would be made to pay the Burra Company for ores delivered, and leave a balance in favour of the company. The carting of wood to the works as fuel was progressing satisfactorily, about 20 men being engaged in cutting and carting the same. It was expected that the New South Wales coal could be advantageously used, therefore but a small quantity of English coal will be required. The mules were in excellent working condition. About 4000 tons of copper ore were still to be delivered by the Burra Company, and there was sufficient coal to smelt the same. Mr. Hamilton states that the position of the company is vastly improved and improving.

La Fortuna Mining Company have advices from Linares to Aug. 25 :—CANADA INCOSA : East of Taylor's shaft : The 4th level is driven east of Buena Ventura winze 14 fms. 5 ft. 1 in. ; lode worth ½ ton of lead ore per fm. Fortuna winze is 10 fms. 0 ft. 7 in. under the 3d level ; lode large, but not to value. The 3d level, east of Chacon's winze, is extended 11 fms. 2 ft. 1 in. ; this end we expect daily to communicate to the level driving west of Terrell's winze, as the ground is nearly spent ; this will leave the water we are now drawing by tackle in the winzes before us back to the engine-shaft, and facilitate our working at Terrel's, Jose's, and Norman's winzes. The 3d level, west of Terrel's winze, is extended 8 fms. 0 ft. 6 in. ; lode worth 1 ton of lead ore per fathom. The 3d level, east of Norman's winze, is driven east 11 fms. ; lode 18 in. wide, composed of calcareous spar, with rich lead, yielding 1 ton of lead per fm.—West of Engine-shaft : Casualidad winze is sunk 2 fms. 0 ft. 11 in. under the 3d level : lode worth 1½ ton per fathom. O'Shea's shaft is 1 fm. 2 ft. 3 in. under the 3d level. We are also making preparations to clear up Kendall's winze, which is west of shaft, and coming down before the 4th level end. The 4th level is extended west of Eugenio's winze 21 fms. 3 ft. 2 in. ; this end is poor at present, but as the ground is easy we hope a change will take place shortly. Addis's shaft is sunk 5 fms. 1 ft. 3 in. under the 4th level. Our pitches are looking as usual. The 5th level is extended 12 fms. 3 ft. 5 in. east of Los Ancoras ; this end is now west of Addis's shaft, when this level is advanced as far east as the shaft we shall commence a cross cut south to the point where the shaft will come down. The 5th level, west of San Enrique winze, is driven west of winze 8 fms. 4 ft. 10 in. ; in this end the lode is small. In El Clavel we have a pare of men stoping east of winze ; lode worth 3 tons her fm. : we have also commenced to stope west of winze with the Englishmen.—LOS SALIDOL : Morris's whim-shaft is sunk 7 fms. 5 ft. under the 1st level. The cross-cut north of Morris's engine-shaft, in the 2d level, is driven 2 fms. 3 ft. 7 in. ; we hope to hole this to the 2d level by the end of this week or the beginning of next. We are also dividing the engine-shaft to make a whim-shaft in the west end of it, as it will enable us to commence to clear east and to drive west much sooner than if we were to wait for the whim-shaft to be communicated to the 2d level. The shaft east of Cologan's is cleared to the adit level ; we find the level is extended further east, which we are clearing. The stope west of William's winze is looking well, worth 2½ tons per fm. The stope east of sump winze is worth 1½ ton per fm. The eastern pitch is looking well. We are happy to state that the present appearances of this mine are very promising.

The Linares Mining Company report, dated Pozo Ancho, Aug. 25 :—The water being now nearly in fork, we shall lose no time in changing the plunger in the 75, soon after which we expect to resume driving that level. The 65, west of Don Carlos's winze, on the north part of the lode, is worth 1 ton of lead ore per fm. The 65, west of Don Carlos's winze, on the south part of the lode, is improving in character, although not yet containing lead enough to value. Richards's winze, sinking under the 55, has been resumed ; The lode is in two branches, worth together 4 tons of lead ore per fm. Warne's engine-shaft, sinking under the 20, is being proceeded with by a party of Spanish miners, who are getting on fairly ; the lode is kindly, containing some lead ore. In the cross-cut, driving south from Crosby's shaft, nothing new has been met with. In San Francisco pertenencia, driving east from Victoria, in the 15, the lode is small, and at present without lead ; we expect to hole this level very soon with that driven west from San Francisco shaft.—East of engine-shaft, on the south lode : San Juan's winze, sinking under the 65 has been resumed ; the lode is worth 1 ton per fathom. The 65, driving east from Miguel's winze, is worth 1 ton of lead ore per fm., very compact, and in hard gronnd. In the cross-cut, driving north from the 55 end, we have driven 3 varas on the lode, probably the south and middle lodes united ; it is composed of calcareous spar and good stones of lead ore ; the end at present is in granite, and will be continued to the north lode. In the cross-cut, driving north from the 31, nothing has been met with since last reported. The lode in the 20, driving east of No. 3 winze, is unproductive.—East of engine-shaft, on middle lode : The lode east of Taylor's cross-cut, in the 45, is worth ¾ ton per fm.—East of engine-shaft, on north lode : The lode in the 55, west of Thorne's, has improved, and is now worth rather more than 1½ ton of lead ore per fathom. East of Gea's winze, on the south part, the men having left the end, has been only partially wrought on since the last report. It is worth 1 ton of ore per fathom. Cristobal's winze has been holed to the level some varas beyond this end, and when the men have completed squaring down the winze they will resume driving the level. The 55, east of Gea's winze, on the north part of the lode, is worth 1 ton per fm. Taylor's shaft, sinking under the 45, is worth 5 tons in a running fathom, proportionably more for the size of the shaft ; the total width of the lode is not known. The lode in the 45, east of Puerta's winze, is worth 1 ton per fathom. Morano's winze, sinking under the 31, in advance of the last-described end, is worth ¾ ton per fm. The 45, east of the point of horse on the north part, still continues in fair ground, and is worth 3½ tons of ore per fm. In the 31 cross-cut, driving north, we have cut a lode or branch worth ¾ ton per fm , which we do not think is the same as that last described in the 45. We shall continue the cross-cut, which at present is in hard granite ; according to what can be seen in the shallow workings, it is probable that there are some varas yet to drive. The winze sinking under the 20, west of Field's shaft, is at present without lead. The crank for the steam whim has not yet been received from Malaga ; we are looking out for it from day to day, meanwhile the horse whims have been at work, both at Thorne's and Taylor's shafts, in order to prevent too great an accumulation underground.

The Pontgibaud Mining Company have advices from Capt. Rickard, from which the following is extracted :—PRANAL : The clearing of the stuff, and laying of the railroad in the 50 is progressing rapidly. We have already set five new stopes—four on the Armand lode, in the back of the 50, and one in the back of the same level, on Henry lode. We are not suffering any inconvenience from the gas, and expect to work this mine with spirit.—MIOCHE : The 10 metre level, south from No. 1 winze, on the No. 6 lode, is turning out 1½ ton of ore per fm., but only part of the lode is carried in the end. We have just begun a 10 in. level, north of the same winze, on the same lode ; this end is also turning out 1 ton of ore per fm. The two stopes working are producing on an average about 1 ton of ore per fm. The sinking of Taylor's shaft below the 20 is progressing satisfactorily.—ROURE : The 40 metre level, south of St. Peter's shaft, on Emily's lode, is worth 1½ ton of ore per fm. The 20 metre level, north from St. Peter's, is still looking very well, and yielding 1 ton of ore per fm. The deep adit level, south from Agnes' shaft, is still looking well ; the lode is wider than the level, but the part carried in the end is worth 2 tons of ore per fm. ; the same level, north from Agnes, is driving by the side of the lode, to get it clear from the old workings. We have put a party of men to cut through the lode in the old level south of St. Peter's shaft ; the lode is 3 metres wide, worth full 4 tons of ore per fm. ; by cutting abroad this old level, we have discovered a lode going off from Emily's lode, at an angle of 45°, it is full 1 metre wide, worth 1 ton of ore per fm. ; this appears to be a separate lode from the one we have worked on about St. Peter's, shaft, and no doubt greatly assisted in making that fine run of ore. Our stopes at Roure are looking well, and yielding good returns.—ROSIER : There is no change in any of our levels since my last ; the stopes and tribute pitches are also much the same. We have had some fine showers, and an increase of hands at the Lavaries, which will add a little to our sampling, which we expect will be upwards of 150 tons. Taking into account the loss of labour by the harvest and the drought, our sampling is rather more than we expected in the early part of the month.

The Gold Mining Share Market has been neglected, the quotations being merely nominal. The only business done has been in Mariquita at ⅜, and Great Nugget Vein, Registered, ⅜.

In Foreign Mines, the market has improved, Cobre Copper were dealt in on Monday at 53¼ ; on Wednesday they reached 55 and 55½, and yesterday changed hands at 56, being the only transaction officially quoted in securities of this description. On Monday, Imperial Brazilian were 2⅛ ; St. John del Rey, 21 ; United Mexican, 6⅛. On Tuesday, Linares 7⅛. Clarendon of Jamaica closed yesterday at ⅛ to ¼ prem. ; Copiapo, 16 to 18 ; National Brazilian, 3¾ to 4 ; Fortuna, ⅛ to ¼ dis. ; United Mexican, 3¾ to 4¼ ; Pontgibaud Silver-Lead, 9 to 11 ; Santiago, 2½ to 2¾.

In Miscellaneous Shares, the market has evidently shown an improvement, and better prices generally been obtained. On Monday, Crystal Palace were 2 to 2⅛ ; English and Australian Copper, 1⅛ ; General Screw Steam Shipping, 13. On Tuesday, Australian Agricultural changed hands at 26 ; Electric Telegraph, 95 ; National Discount, 6⅛ to 6. On Wednesday, Berlin Water-Works were 5⅝ ; Canada, 126 ; Crystal Palace, 2 ; ditto, Preference, 5⅜ ; English and Australian Copper, 1⅛ ; London General Omnibus Company, 4 to 4⅛ ; National Discount, 6⅛ ; Peninsular and Oriental Steam, 65⅛ ; Scottish Australian Investment, 1¾. Yesterday transactions were effected in Canada at 126 ; Crystal Palace, 2 to 2⅛ ; ditto, Preference, 5¼ ; General Screw Steam Shipping Company, 13⅛ to 13⅜ ; National Discount, 5⅞ ; Royal Mail Steam, 72 to 72½ ; Peninsular and Oriental, 66 to 66⅛. In Joint-Stock Banks the market has been rather flat ; the quotations will be found in the usual place.

In American securities, there has been rather more doing during the week, and the market is cleared of many of the lots which had been offering at low prices. This is not to be wondered at, as the rates of interest which apparently really sound things are yielding are a strong inducement to invest capital.

At the Oriental Gas Company meeting on Wednesday (Capt. Barber in the chair), a resolution was unanimously passed bringing the company under the New Joint-Stock Act. 1856, with Limited Liability. A vote of thanks to the Chairman terminated the proceedings.

One of the latest projects to which subscriptions are invited in Paris is the Compagnie des Maisons Mobiles—literally, the Moveable House Company—with a proposed capital of ten millions of francs, or 400,000*l.*, in 4*l.* shares. The idea is to construct, and sell or let, portable dwelling houses and other buildings. The promoters profess to have a special view to the requirements of the labouring classes in the French metropolis, who suffer so severely from the high rents now demanded. The shares are to be taken by the company at par, in payment for work executed by it.

The *Chili*, the first auxiliary screw clipper for the new line of packets between London and Valparaiso (touching at Havre), is of extraordinary strength, and will be fitted with all the modern improvements of the day : she has Capt. Peacock's patent keel, to prevent rolling ; also his patent stern post, with arrangements for the injection and blow-off cocks to act, all above the deep load line, having no holes through the bottom of the ship, and thus avoiding the risk of accident, to which ordinary steamers are more of less liable. She is also fitted with Messrs. Throughton and Bevan's patent boat-lowering apparatus, and Messrs. Winchester and Brewer's patent distilling apparatus. The line is being established by Messrs. Seymour, Peacock, and Co. Capt. George Peacock, of that firm, has spent a great many years on the west coast of South America, is well acquainted with the requirments of the trade, and took the first steam vessel through the straits of Magellan, in 1840.

From Rome, we learn that the Pope has granted permission to Marquis Paolo Rescalli and Count Giorgio Brembali, of Milan, to work the coal pits of Sogliana, in the Legation of Forli.

Mr. Evan Hopkins has left London to inspect some mineral properties in Devon and Cornwall.

Mr. Calvert has just returned to London, having been engaged making a geological section of a portion of the North of France.

We are informed that Mr. J. E. Fisher will act, *pro tem*, as London agent of the Wheal Jamaica Company, in consequence of the death of Mr. J. Douglas.

HULL, SEPT. 4.—The market shows a disposition to recede, but stock is not offered to any extent, and we fancy it is only temporary. The wheat harvest in this district is a fine one, and it is a fact of the first importance with reference to the prices of railway shares.—T. W. FLINT AND CO.

SHEFFIELD, SEPT. 3.—We have scarcely any business doing in mining shares, which are flat, and offered at lower prices than of late, Brightside Mine is doing rather better at present. The Eyam Mining Company are getting a large quantity of ore, and the lead of very good quality. The following are the quotations :—Brightside, 60 to 63 ; Crafnant, 4¾ to 5 ; Eyam, 26 to 27 ; Peak United, 6 to 6½ ; Prince of Wales, 7 to 7½.—E. SMITH AND SON.

GREAT STEAM BOILER.—The iron foundry at Couillet, in Belgium, has just cast in one piece an enormous steam boiler, to be used at the coal mine of Gricœul, at Paturages. It is about 12 feet in diameter, and weighs upwards of 45 tons. It was found necessary to construct a truck of extraordinary strength to carry it to the mine, and which was drawn by 54 horses. The distance performed was only about two leagues a day. The cost for conveying this colossal boiler from the foundry to the mine will be about 8000 francs, including the repair of damage done to the roads.

LEAD ORES.

Mines.	Tons.	Price per ton.	Purchasers.
Sold on the 30th August.			
Laxey	100	£21 7 6	Newton, Keates, & Co.
Welsh Potosi	60	14 0 0	ditto
Sold on the 1st September.			
East Logylas	100	£13 11 6	Walker, Parker, & Co.
Cwmystwith	100	13 9 0	ditto
Sold on the 3d September.			
Wheal Mary Ann	90	£24 1 0	Walker, Parker, & Co.

BLACK TIN.

Mines.	Tons	c.	q.	lb.	Price per ton.	Amount.	Purchasers.
Sold on the 20th August.							
Pedn-an-drea United	5	8	2	10	£70 0 0	£380 1 3	Bissoe.
ditto	0	4	2	26	22 0 0	5 4 1	ditto
Sold on the 30th August.							
St. Austell Consols	9	5	0	0	£73 0 0	£675 5 0	Enthoven.
ditto	1	1	0	0	60 0 0	63 0 0	ditto
Sold on the Mine.							
Wheal Sidney	7	15	0	0	£76 10 0	£592 17 6	Calenick, &c.
ditto	0	5	0	0	53 10 0	13 7 6	Daubuz.
Tretoil	6	0	0	0	70 10 0	423 0 0	Enthoven.

COPPER ORES.

Sold at LIVERPOOL on the 30th August.

	Tons.	Price per ton.	Purchasers.
Lot 1	60	£15 15 6	J. Keys and Son.
Lot 2	60	15 12 6	C. Lambert.

The other bidders were—Messrs J. Bibby, Sons, and Co. ; P. Grenfell and Sons ; Newton, Keates, and Co. ; Pocket Nook Co. ; Vivian and Sons ; Williams, Foster, and Co.

COPPER ORES.

Sampled August 13, and sold at Swansea September 2, 1856.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Cobre	100	13⅜	£12 10 6	Kapunda	29	33⅜	£34 13 6
ditto	96	14⅛	13 10 0	ditto	26	32⅜	32 18 6
ditto	94	13⅞	12 14 6	Malaga	85	7⅛	6 9 0
ditto	88	13⅛	12 9 0	ditto	56	7	6 3 0
ditto	83	13½	12 19 0	ditto	24	6⅜	5 13 6
ditto	50	21¼	20 7 0	ditto	23	10⅜	9 18 0
ditto	49	21	21 9 0	Spanish	90	14⅞	13 10 6
ditto	45	21	21 4 0	ditto	85	15⅛	14 5 6
ditto	16	66	63 7 0	Cronebane	53	5⅛	4 11 6
Berehaven	129	11⅜	11 5 6	ditto	39	5⅛	4 15 0
ditto	123	11⅛	10 18 0	ditto	2	39	38 2 6
ditto	106	10⅜	10 3 6	Tigrony	2	39	38 2 6
Garrucha	111	4⅜	4 5 0	Knockmahon	62	9⅛	9 9 0
ditto	105	9	7 19 0	ditto	32	12⅛	11 17 0
ditto	10	15⅛	14 0 0	Castilian	31	8⅜	8 2 6
ditto	10	22⅜	23 12 0	ditto	15	6⅜	5 17 6
ditto	45	3⅜	3 2 0	ditto	12	9⅜	8 15 0
Kapunda	34	39⅜	39 10 6	Peninsular	40	6⅞	6 7 6
ditto	31	37⅛	38 12 6	French Slag	23	6⅜	4 10 0
ditto	30	55⅜	56 18 0	Preamimma	23	17	17 5 0
ditto	25	34⅛	34 11 0	Wheal Emma	65	9⅛	8 9 0
ditto	30	30½	30 17 6				

TOTAL PRODUCE.

Cobre	621	£9942 10 0	Tigrony	2	£ 76 5 0
Berehaven	358	3873 14 6	Knockmahon	94	965 2 0
Garrucha	281	1822 0 0	Castilian	58	445 0 0
Kapunda	205	7899 17 0	Peninsular	49	312 7 6
Malaga	188	1256 11 0	French Slag	23	103 10 0
Spanish	175	2430 12 6	Preamimma	23	396 15 6
Cronebane	94	503 19 6	Wheal Emma	65	549 5 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Copper Miners' Company	95	£1234 17 6
Freeman and Co.	216½	1839 19 6
P. Grenfell and Sons	255	3861 4 0
Sims, Willyams, Nevill, and Co.	69	843 1 6
Vivian and Sons	576	5168 10 6
Williams, Foster, and Co.	419½	4478 13 6
Mines Royal Company	88	1095 12 0
Spitty Copper Company	96	1296 0 0
British and Foreign Copper Company	50	1008 15 0
Mason and Elkington	95	4248 4 6
F. Bankart	119	1377 19 6
C. Lambert	157	4184 12 0
Total	2236	£30,577 9 6

Copper ores for sale at Swansea, Sept. 16.—Cobre 92, 87, 86, 85, 84, 73, 53, 52, 46, 17—Berehaven 117, 116, 98, 79—Knockmahon 73, 71, 70, 68—Namaqualand 40, 28, 27, 10, 41, 10, 10—Malaga 32, 24, 23—Holyford 39—Spanish 14—Tunckillo 4=1669 tons.

AVERAGES.

	Produce.	Price.	Standard.
British	10 3-16	£ 9 14 6	£117 11 0
Foreign	15¾	15 3 0	110 10 6
Sale	14⅛	£13 3 6	£111 18 0

Totals—British, 613 ; Foreign, 1623=2236 tons (21-cwts.)

AVERAGES OF LAST SALE.

	Produce.	Price.	Standard.
British	9	£ 8 10 0	£119 6 6
Foreign	17 15-16	17 5 0	108 13 6
Sale	15 15-16	£14 19 0	£110 5 6

Totals—British, 470 ; Foreign, 1322=1792 tons (21-cwts.)

COPPER ORES.

Sampled August 20, and sold at Randal's Hotel, Pool, September 4.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Wheal Basset	106	£7 15 6	North Roskear	47	£4 16 0
ditto	104	9 10 6	ditto	32	6 2 6
ditto	100	7 19 6	ditto	31	0 11 6
ditto	86	7 12 6	West Wheal Seton	85	3 5 0
ditto	82	8 6 6	ditto	79	9 1 6
ditto	62	8 14 6	ditto	70	3 9 0
ditto	60	7 11 6	ditto	66	10 18 6
ditto	38	3 14 0	Wheal Seton	58	6 7 6
ditto	36	2 8 0	ditto	37	4 8 0
ditto	17	12 17 6	ditto	26	14 3 6
South Frances	91	3 15 6	Pendarves	80	5 15 6
ditto	73	6 16 0	ditto	35	1 18 6
ditto	72	5 12 6	ditto	18	0 11 6
ditto	71	6 16 0	North Wheal Crofty	48	5 7 0
ditto	58	6 19 0	ditto	47	5 4 6
ditto	55	11 10 6	ditto	46	1 19 0
ditto	54	10 5 6	ditto	45	8 5 0
ditto	50	11 6 6	Pemb. and East Crinnis	55	4 12 6
ditto	21	4 10 6	ditto	43	5 0 6
ditto	14	4 8 0	ditto	40	4 19 6
South Tolgus	100	5 3 6	ditto	14	1 10 0
ditto	61	5 17 0	Jackson's Ore	55	0 3 0
ditto	52	5 13 6	ditto	16	0 2 6
ditto	49	8 14 0	Copper Hill	34	9 16 0
ditto	44	8 19 0	ditto	29	6 3 0
ditto	39	23 1 0	West Stray Park	40	6 9 0
North Roskear	100	6 4 0	South Roskear	16	4 13 6
ditto	74	5 12 0	East Tolgus	16	4 18 0
ditto	51	6 13 0			

TOTAL PRODUCE.

Wheal Basset	691	£5391 19 6	North Wh. Crofty	186	£ 963 6 6
South Frances	559	4042 8 6	Pemb. & East Crin.	152	690 9 0
South Tolgus	345	2888 10 0	Jackson's Ore	71	10 5 0
North Roskear	335	1812 19 6	Copper Hill	63	511 11 0
West Wheal Seton	300	1955 14 6	West Stray Park	40	258 0 0
Wheal Seton / Pendarves	254	1440 16 6	South Roskear	16	74 16 0
			East Tolgus	16	78 8 0

Average Standard .... £129 18 0 | Average Produce 7¼

Average Price per ton £6 13 0

Quantity of Ore .... 3028 tons | Quantity of Fine Copper, 218 tons 19 cwts.

Amount of Money £20,119 4 0

LAST SALE.—Average Standard .... £127 16 0.—Average Produce 7

Standard of corresponding sale last month, 124*l.* 8s.—Produce 7.

COMPANIES BY WHOM THE ORES WERE PURCHASED.

	Tons.	Amount.
Mines Royal Company	232	£1377 2 0
Vivian and Sons	339	2007 10 10
Freeman and Co.	212	1555 5 0
Grenfell and Sons	512	3126 14 8
Crown Copper Company	186	973 9 0
Sims, Willyams, Nevill, and Co.	212	1689 16 4
Williams, Foster, and Co.	422	2527 15 11
Spitty Copper Company	431	2976 2 0
Mason and Elkington	189	1679 18 9
F. Bankart	170	1162 9 0
Copper Miners' Company	123	1043 0 6
Total	3023	£20,119 4 0

Copper ores for sale on Thursday next, at Tabb's Hotel, Redruth.—Mines and Parcels.—West Basset 668—Carn Brea 578—Wheal Buller 500—North Basset 369—Par Consols 334—Alfred Consols 300—Rosewarne United 195—Wheal Margery 184—Great Wheal Alfred 180—Boiling Well 163—Levant 144—Halamanning 130—West Alfred Consols 86—Clijah and Wentworth 84—South Crenver 79—Wh. Unity Consols 64—Carrack Dews 59—Wheal Anna 56—Treloweth 53—Botallack 51—West Wheal Providence 34—Wheal Tremayne 30—Cook's Kitchen 16—Wheal Agar 15—Wheal Trenwith 14—North Wheal Gilbert 10—Wheal Guskus 8.—Total, 4404 tons.

Copper ores for sale on Thursday week, at the Royal Hotel, Truro.—Mines and Parcels.—Devon Great Consols 2310—Phœnix Mines 590—West Caradon 350—Bedford United Mines 242—Wheal Friendship 160—Hingston Down 153—Collacombe 153—North Wheal Robert 126—Sortridge Consols 122—Kelly Bray 113—Wheal Arthur 80—Devon and Courtenay 64—Wheal Zion 53—Lady Bertha 50—Devon Buller 42—Tavy Consols 36—Wheal Langford 25—Hawkmoor 20.—Total, 4689 tons.

FIRST SALE IN SEPTEMBER.

Year.	Tons.	Prod.	Amount.	Standard.	Ore copper.	Cake copper.
1847	3594	8¼	£21,155 3 6	£104 12 0	£71 5 0	£98 0–£101 0
1848	4228	7⅝	17,916 18 0	91 2 0	65 5 0	79 10
1849	3801	7⅝	20,549 12 6	103 3 0	68 8 0	79 10
1850	3088	7½	20,542 19 6	104 13 0	68 5 0	79 10
1851	3505	7⅝	17,544 5 0	102 2 0	65 19 0	84 0
1852	3295	6⅛	19,744 4 0	134 2 0	92 6 0	102 10
1853	2655	6⅛	15,438 7 0	132 3 0	89 15 0	107 10
1854	2185	5⅞	14,704 5 0	142 16 0	96 5 0	126 0
1855	2270	7⅛	18,185 15 6	143 16 0	107 1 0	126 0

The copper in the ore expresses the nett price per ton of copper paid to the miner.

THE PROGRESS OF MINING IN 1855.
BEING THE TWELFTH ANNUAL REVIEW.
By J. Y. WATSON, F.G.S., Author of the *Compendium of British Mining* (published in 1843), *Gleanings among Mines and Miners*, &c.

A FEW COPIES of the REVIEW OF 1855, containing Statistics of the Metal Trade, the Dividends and Per centage Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also, a FEW COPIES of the REVIEW OF 1852, 1853, and 1854, MAY BE HAD on application at Messrs. WATSON and CUELL'S Mining Offices, 1, St. Michael's-alley, Cornhill, London.
Also, STATISTICS OF THE MINING INTEREST. By W. H. CUELL.

WATSON AND CUELL, MINING AGENTS (Established nearly 20 years), are always in a position to BUY and SELL SHARES in BRITISH MINES, and OFFER THEIR ADVICE in all matters relating to MINING.
1, St. Michael's-alley, Cornhill, London.

Notices to Correspondents.

*** Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly *filed* on receipt: it then forms an accumulating useful work of reference.

THE COPPER TRADE.—SIR: Mr. T. I. Hill expresses himself rather freely when he says, "Your correspondent gives utterance to a gross absurdity, when he says that 200,000*l.* or 300,000*l.* are necessary to carry on a copper smelting-works." I beg to ask that gentleman to look a little more seriously to the statement made, and he will soon find himself in the greatest error. In the first place, it is neither implied or expressed in the way that Mr. Hill imagines: 200,000*l.* or 300,000*l.* is stated to be necessary, in order to counteract the present baneful influence of the monopolists, who are admitted by Mr. Hill to be very wealthy, and one firm is reported to have as much capital now at work: be that true or otherwise, I will not take upon myself to say. Now, Sir, I cannot see wherein the gross absurdity exists, in stating that 200,000*l.* or 300,000*l.* are required in order to establish an independent miners and consumers' company; and if Mr. Hill can effect such desired independence with a less sum, he is much more clever than I give him credit for. I beg to state most clearly and distinctly, that it is a piece of profound folly to attempt so gigantic a task with anything short of a subscribed capital of 300,000*l.* or 400,000*l.*; for be it remembered that both miners and consumers are alike complaining, and, in order to counteract the influence, works capable of reducing the entire produce must be at hand, or else where is the remedy for an universal evil?—A MINER.

THE MINERS' SMELTING ASSOCIATION.—SIR: "Young Smelter" is again obliged to resort to the *Mining Journal*, and through it to express his thanks for the many important communications he has received during the week; and at the same time to inform the writers and the public at large that there is no doubt of complete success. It was thought much more prudent to commence the movement with care, having a regard to its magnitude, as well as its importance, and thereby obtain the expression of the miners, consumers, and others, in respect to the same, which course is productive of the most satisfactory results.—YOUNG SMELTER.

"Shareholder" (Reigate).—It would be well for persons, previous to their embarking in any undertaking, to ascertain the character of the directors, and to look well to their antecedents: the parties in question are well known. All that we can advise our correspondent is, to make enquiries himself, and then use his own judgment.

WHEAL MARY ANN.—SIR: I regret to observe, in your last Journal, a letter, written by some officious person, relative to this mine, stating that, at our next audit, we can pay the same dividend as at the last meeting—2*l.* per share—and increase the balance in hand 700*l.*, also advising a bonus. This is an erroneous statement, as the abstract of the next audit will prove, when issued. The mine is certainly looking exceeding well, but your officious correspondent has forgotten that the price of lead has gone down considerably. Your inserting this in your next Journal will oblige, fearing the public might be misled.—P. CLYMO, jun.: *Liskeard, Sept.* 2.

JOINT-STOCK COMPANIES ACT, 1856.—SIR: Can any of your legal correspondents inform me whether a company registered with limited liability will be compelled to register their annual balance-sheet with the Registrar of Joint-Stock Companies?—D. A.: *Paris, Sept.* 2.

TRENOW CONSOLS MINE.—"A Shareholder" complains that this mine has been greatly mismanaged; meetings have not been called; and blames the captain for the mode in which he is acting—in fact, intimating that the officials are working in collusion. The address drawn up by Mr. Henry Viner not only deals in generalities, but likewise indulges in vituperation: no cause can be served when such means are adopted. The agent, we believe, has always borne a fair character, and been employed by several influential persons, largely interested in Cornish mining. A plain statement would have engendered greater confidence with the shareholders than a lengthy document, which appears mainly to be alluding to the private affairs of the person who has provoked the spleen of "A Shareholder." We uphold no party or individuals, but we would recommend that if good is to be done, or redress obtained, a different and more sensible course must be pursued.

BUCKLAND CONSOLS—BEDFORD CONSOLS.—SIR: Seeing in your Share List Buckland Consols and Bedford Consols classed with the mines which have sold ores, and knowing them to be young mines, I should thank the manager to inform those interested when they make their first sale, where sampled, what quantity from each mine, and the price per ton.—W. GREENSLADE: *Horrabridge, Sept.* 2.

"T. C. S." (Gloucester-place).—The directors having borrowed the money of the company, without the consent of the shareholders or the other committeemen, would, under the peculiar circumstances of the case, be liable to an indictment for conspiracy, with intent to defraud. Neither of them are men of substance, and any money spent in litigation would be wasted.

THE MINERS' SMELTING ASSOCIATION.—SIR: I need not tell you with what intense anxiety the miners of this county are looking forward to the consummation of the scheme, it being regarded as one of the utmost importance to this great copper-producing district; and if any one thing can contribute to the well-being of it, it is the establishment of smelting upon a much more satisfactory basis than at the present moment, so as to place the mining interest upon a less fluctuating footing, than while it is subject to the influence and caprice of the present monopoly. The subject when first mooted was received with the usual sarcastic sneer of agents and principals of the smelting community; but now they seem to think it a little more stable than "wind," as they were pleased to call it, and serious thoughts of its power and effect are now filling their minds, and coming events are casting their shadows before them. It may be inferred from the quiet but yet skilful movements of "Young Smelter," that he is not quite so young in the affairs of mining and smelting as his present name would indicate. Revolution, and a systematic mode of reformation, in the smelting world opens up a wide field for enterprise, and, when completed, the miners will not fail to express their appreciation of "Young Smelter's" efforts in a much more tangible form than words can possibly convey. To enter upon such a task more than ordinary sagacity and courage is required, and if it will afford the aspirant any satisfaction, I beg to assure him that he has the unanimous sympathy of Cornwall's sons, whose source of income is from the mining world.—ONE INTERESTED: *Redruth, Sept.* 3.

"F. E. H." (Wandsworth).—At Twista, they precipitate the copper with acid in tanks, using scrap-iron with it: in Norway, they have a similar process. As yet it has not been published here, nor has DR. Nielsen given any account of the acids used, or the quantity required to reduce a ton of copper ore.

WHEAL EMMA—MR. N. ENNOR AND CAPT. JEHU HITCHINS.—We have received from MR. ENNOR a very lengthy communication, entering into various circumstances in which both gentlemen have been concerned; but the matters treated are of too personal a nature for publication, and not being in any way calculated to lead to a satisfactory solution of the points at issue, we must decline its insertion. We hope to hear from our correspondent on a more practical topic, and one of general interest to our readers.

THE NEW JOINT-STOCK COMPANIES ACT, 1856.—SIR: A most important clause is inserted in this Act, clearly proving, in my opinion, the loose manner in which our Legislature is conducted. All companies not within the jurisdiction of the Stannaries, or under a special Act of Parliament, are compelled to register under the Act in question; but they have the option of being "limited" or "unlimited;" and it appears to me an anomaly that any board of directors should have the power to register a company with unlimited liability without the consent of the shareholders; whilst on the other hand, if the liability is to be "limited," it is necessary to call a public meeting, and obtain the consent of the shareholders.—J. H.: *Southampton, Sept.* 3.—[Our correspondent must desire a most remarkable piece of legislation, if he considers the directors should have the power to alter the entire constitution of the company at their discretion. The effect of the clause to which he evidently alludes will undoubtedly be to subject every company not within the Stannaries, or working under Royal Charter or Private Act, to its provisions, whether a meeting of shareholders be called or not; but it is not a question of limited or unlimited liability, since it would be equally impossible for the directors of a company under the Limited Liability Act, 1855, to register with unlimited liability, without calling a general meeting, although no meeting would be required to enable them to register with limited liability. The fact, then, is that whilst the Act provides that all companies, with the exception of those above referred to, permits the constitution of the company to remain materially the same, unless the shareholders themselves desire to change it, and as all companies not under the Act of 1855 have unlimited liability, a meeting is requisite to render the liability limited.—ED. *M. J.*]

"T. S." (Rothwell).—Great neglect has been shown in too many instances by the managers of collieries, and many of them have a great distaste and dislike to those who draw attention to the dreadful accidents which lately have been of such frequent occurrence. The publication of a communication of so old a date would at present tend to no useful purpose. Much has been written on the subject recently, and afforded a quantity of new and useful information.

SHARE ADVERTISERS.—SIR: The numerous complaints which have been constantly received on this subject, are sufficient to raise a loud cry against the gross injustice and dishonesty, not only against more honourable brokers, but the public generally. The several parties who advertise prices to shares are well known to the mining market as not being in a position to hold the shares they profess to sell, nor to supply them if applied for—as numberless instances every week bring to notice. These advertisers generally are unknown but by the names attached to their advertisements; and if the public were only to make enquiry into their antecedents, as well as present position, they would very soon condemn the gross and fictitious system pursued. The object, too, appears to me to be a very unbusiness-like method of procuring a correspondence; being unknown to the mining public, and without the means or ability of establishing a connection in an honourable or legitimate way, they quote prices, as sellers, considerably below the real market figure, and on receiving applications from parties who are ignorant of their standing, are informed that the stock is sold, they must communicate with their clients, or attempt to pass off some worthless shares in exchange, so otherwise to secure a correspondence. I do not object to a fair competition, when conducted with honour or principle, but the practice pursued is one to be condemned by every honourable man. If, Mr. Editor, this unjustifiable course be continued, I shall, in an early Journal, with your permission, furnish you with numerous instances of gross and infamous proceedings, which you, with your knowledge of business, will readily term "swindling." Your correspondent, referred to in last week's Journal, mentioned a circumstance wherein he states that he purchased and paid for two Rosewarne's 12 months since, and has not yet received the shares. Now, I do consider that, in justice to the more honourable brokers, his name should be publicly given, so that the innocent should not suffer with the guilty, and he receive the well-merited punishment of public condemnation. I much regret that I should have to complain of those who by their dishonourable proceedings assist in bringing down upon the legitimacy of the mining interest that odium which the few well-known brokers have strenuously endeavoured to avoid by a long career of honesty and integrity.—LOOKER-ON.

NORTH STAFFORDSHIRE COLLIERY.—SIR: Can any of your readers inform me whether there is now extant any company bearing the title of the North Staffordshire Colliery, or if it is incorporated with any other company. I have documents bearing the above title, dated Aug. 30, 1839, but they contain no address.—J. E.: *Sept.* 4.

ADVERTISING PRICES FOR MINE SHARES.—SIR: As a contribution to the censure on some of the advertising brokers, who seek to delude the unwary into sales, I may mention that one man wrote me that undoubtedly he could procure Cwm Daren at 1s. per share, upon which I ordered 50, but I have never received a reply. Another said he could get Cubert shares at 2s. 6d.; I ordered some, but the reply was that although quoted at 2s. 6d. there was none for sale. From another party I ordered some Great Sheba shares, at three times the price quoted in a list in your Journal, but there were none of them to be had at all. Port Phillip shares, although scratched entirely out, are not to be bought for 5s. each.—JUSTITIA: *Stourport, Sept.* 4.

MALLEABILITY OF GOLD.—SIR: In the last paragraph of my communication, in last week's Journal, my meaning has been perverted by the omission of a word or two, and rendered inconsistent with the context. I did not state, nor mean to state, that much more gold might be separated than at present, for that form of sentence would include amalgamating processes, which should have been excepted, and which exception was implied by the words omitted. My meaning was, that by stamping the soil before submitting it to amalgamating processes more gold might be obtained in the first instance by hand alone, than is at present the case.—A. A.

CARN VIVIAN.—SIR: I should feel obliged if any of your correspondents would advise the shareholders of this mine how to act under the following circumstances:—At a meeting of shareholders held on the mine two months since, which I attended, it was agreed to unanimously that the driving of a shallow level should be immediately suspended, which was done accordingly, there and then, in the presence of some of the company who inspected it. In the interim between that meeting and another held on Wednesday last, however, Mr. Bray, of Bodmin, the purser, and another shareholder, representing between them one-fourth of the mine, still continued the interdicted driving, which is of no use to the Carn Vivian shareholders, and only done to prove some ground in an adjoining sett, which has been taken up separately from the Carn Vivian property.—B. R. S.: *Liskeard, Sept.* 4.

"ON QUARTZ CRUSHING AND GOLD EXTRACTION—WHICH IS THE BEST MACHINE?"—SIR: The above forms the subject of a letter in your useful Journal of August 30, signed W. Radley, Ch.E., criticising and slaughtering all machines hitherto constructed, placing Britten's *hors de combat*, though easy of improved reconstruction, and endeavouring boldly to completely canonise S. T. Jones's, first, by calling it "that unfinished patent;" and secondly, by exploding against it his 4th, 5th, 6th, 10th, and 13th canon, which fall incumbent, through the ignorance evinced of the various practical applications and merits of S. T. Jones's gold extracting machine, for which Her Majesty's Royal Letters Patent, with the Great Seal attached, were obtained many months prior to the date of Mr. Radley's specification, of June 20 last.—S. T. JONES: 3, *Copthal-buildings, Sept.* 4.

TRENOW CONSOLS.—SIR: Mr. Henry Viner, Professor of Music, of Penzance, has issued a circular to the shareholders, animadverting most strongly on the conduct of Capt. Richards, who bears a very estimable character. One ground of complaint against him is, that he recommended the committee to stop Wheal Margery; he sold his shares then at 30*s.* each, they are now worth over 30*l.* He cites Wheal Alfred and Providence Mine, in all three of which Capt. Richards has been a loser. He may, probably, accuse that gentleman of errors in judgment, but he certainly bears testimony to his honesty of purpose. Previous to Mr. Viner's communication I knew nothing of him. However musical his capabilities may be, I do not consider it a proof of mining abilities. The assumptions he puts forward are singular, to use the mildest term, and the power attempted to be grasped by one shareholder enormous. It would be as well that his co-adventurers, before they entrust him with such authority, should know whether he is capable of exercising it, and if the alleged abuses exist. Capt. Richards is known to be a man of considerable experience, and has been employed in seven good mines. If Mr. Viner wishes his brother adventurers to co-operate with him, he should lay before them a lucid and business-like account, instead of a rambling statement of personalities, without any substantiation.—AN ADVENTURER: *Sept.* 2.

WHEAL LUDCOTT.—SIR: We are much surprised that this young but promising concern is never reported on in your Journal for the benefit of distant shareholders, who can have no means whatever of gleaning any information as to general appearances except from the reports presented at the quarterly meeting. It is well-known that during an interval of three months great and important changes frequently occur, and whether for better or worse, ought to be made known. There is now a resident agent on the mine fully capable of reporting, which we hope will be attended to after this hint from—A SHAREHOLDER: *Liskeard, Sept.* 4.

"C. A." (Tansaw).—A letter addressed to Mr. Wm. Mickle, Willington, Durham, will reach that gentleman.

WHEAL GUSKUS.—SIR: I understand that a meeting of this company is shortly to be held. We have fortunately got rid of the incubus of a director who resided some hundreds of miles from the scene of operations, as well as the London offices. The committee now are easily reached, and can be summoned to their duties without the intervention of postal delays and telegraphic messages. The property is good, and if the shareholders have spirit enough to develop the new copper lode, all may go well. If they would look after their own interests, let them attend the next meeting, and then decide on what is to be done. This, however, is not to be effected by resolutions on paper, but an energetic working is necessary; and whatever is then arranged should be carried out. Both directors and the general body of shareholders have talked enough: what we now require is work, and that done speedily.—AN OLD SHAREHOLDER: *Dublin, Sept.* 3.

WHEAL EMMA (Buckfastleigh).—Mr. Christopher Robins having signed his letter, he has a right to expect that any reply made thereto should be similarly authenticated. "Q. S." must, therefore, attach his name to future communications on this favourite topic of censure.

WHEAL ZION MINING COMPANY.—SIR: I wish to know if the late call of 5*s.* per share was paid. The directors, some time since, issued a circular, threatening to hand the names of defaulters to merchant creditors. It would be as well if the purser would inform us, previous to the next meeting, whether all the committee have paid their calls: before they ask us, they should surely look at home. Recent transactions in banks, insurance companies, &c., have made me look with a suspicious eye on directors. The Master in Chancery and the official manager have informed us that many companies are solely concocted for the benefit of directors and promoters; and when these are wound-up, we find the shareholders have to contribute, while the directors have been obtaining a good living at their expense. I by no means wish to infer that this is the case in this mine; the prospects of the mine were stated to me by a member of the Mining Exchange to be of a different nature than they have proved, which if I had studied the reports published weekly in your Journal would have shown. I shall be willing to pay all that is due, when I see others have done the same. I shall attend the meeting when summoned, and conclude this letter with the advice that "those who live in glass houses should never throw stones."—CLERICUS: *Bath, Sept.* 4.

WHEAL HENDER.—The report published last week under the name of "Rosewarne" should have been "Wheal Hender."

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, SEPTEMBER 6, 1856.

We remarked last week that a strong impression existed in the minds of many, who keep a careful watch over passing events and of coming matters, that the position of the joint-stock banks, as well as of private banks, was not so encouraging as the published statements would seem to warrant, and that a crisis would soon occur in this department of British enterprise. In this feeling we joined, and we were not, therefore, surprised to hear of the suspension, or failure, of the ROYAL BRITISH BANK, which took place on Wednesday.

Apart from the general question of banking in the present state of affairs, there were special indications connected with the Royal British Bank which cautious people clearly saw through, and hence that rapid fall, within a month, of from 47 to 23 in the price of the shares; as well as the fact of the numerous transfers of accounts since the general meeting of its proprietary, which was held on Aug. 15. Our business in reference to this matter is not, however, as respects individual cases, but as a comparative question with mining, to show that the latter presents much more lucrative results, with the certainty of limitation of liability, while the former gives no security to the shareholder, and that the benefit is an uncertain interest of 4, 5, 6, or perhaps 10 per cent. We alluded generally to banking, insurance, and railway companies, and continuing our series of articles on this head, we will be able to show the soundness of our views. Mining is deprecated frequently as a ruinous investment, or unwarrantable speculation, yet, as we have already shown, the whole amount absorbed in all the different mines is a mere tithe as compared with other sources of enterprise; even as compared to existing undertakings in the different branches, and if we could ascertain the capital lost in defunct associations, the difference would be starling indeed.

It was our intention to have gone minutely into banking, railway, and insurance statistics on the present occasion, but the huge mass of figures which they present renders it a task not quickly accomplished, and we must defer details for another week.

The phase which has come over all these three classes during the past week, or within the last month, is substantial confirmation of the wisdom of those who do not put their faith in the infallibility of such establishments. At the recent meeting of the shareholders of the Royal British Bank a dividend of 4 per cent. was declared, and their assets set forth as 810,204*l.*, as against 842,428*l.* of liabilities to depositors, or a difference of only 32,224*l.* in the event of the whole of the money being called for. The sequel shows the utter fallacy of these figures, and it now becomes a very serious question as to the conduct of those directors and the manager who retired at the meeting, for they must have been cognizant of the real state of their affairs, and that the balance-sheet was fabulous as respects the power of the bank to meet its engagements. The Royal British Bank, however, is not a solitary example of this most unjustifiable course of mystifying accounts: it is the general practice. At all the meetings, and in all the statements put forth by the managers, we hear a great deal of the large profits which have accrued since "the directors had the pleasure of meeting the shareholders;" but is there any one instance of the losses being shown, or the doubtful securities set forth that the balance profit may be determined? The fact is, that it is the variable practice to embrace in the "assets" every description of securi whether good, bad, or doubtful; and even dishonoured acceptances still carried forward as "assets," as long as there is a shadow of a cha of any of the persons whose names are attached being able to pay o compromise. This is a most unsound system; it is, indeed, a decept which nothing justifies; and the case of the Royal British Bank throw some light on this scandalous principle, which is so univers adopted by joint-stock banks, railway, and insurance companies. If ing undertakings were to pursue such a course, what an outcry th would be! The hardest language would be applied; they would be scribed as swindlers; and yet these leviathan establishments do it w impunity, as a mere matter of course. It is, however, the usual way this country—little offenders are severely punished for the slightest linquency; but great transgressors are justified in any means if they attain the end.

Retribution quickly follows, nevertheless, and the glossing over of err and losses does always tell, sooner or later. Look at the consequen which will possibly accrue to the unfortunate shareholders in the Ro British Bank. No legislative enactment limits their liability; every sh holder is responsible to the last shilling he possesses, and for what ha incurred this frightful risk and responsibility? For a dividend of 4 cent., made up, perhaps, from capital account. Now, the whole of paid-up capital has vanished into air, it is said, and there is every pr bility of the unfortunate shareholders being called upon largely to pay the deposit accounts. Of these, it appears, there are 42 widows and married persons. Where is there a parallel case in mining? Where such an enormous sum been lost, and where have 42 widows and spinst in one enterprise, lost all their investment, and, perhaps, been brought beggary and ruin?

The liabilities of this bank to depositors alone is more than half amount of the whole capital of the 94 dividend-paying mines enumer in former remarks, but in which the original capital has not only been turned four times over in dividends, but the shares continue at enorm premiums, so that if the original shareholders realised they would have ceived 10*l.*, 20*l.*, and even much more, for every 1*l.* laid out. Is it unaccountable, therefore, that mining should be decried, and other aff which entail such frightful distress, upheld? The fallacy is being through, no doubt; the mania for banking is passing away, and t violent shocks must tell on the general question. We have long that better times were gradually coming over mining—that the publi large was beginning to regard it in a very different light.

By those who carp against mining with unceasing energy, it will said that the ruin of the Royal British Bank is attributable to mining this, however, dispassionate minds will demur, for although it app true that 100,000*l.* have been lent by the bank to an iron compan must be special pleading, indeed, to render this, "mining," in the u acceptation of the term. It is evidence, truly, of the unsound manne which the business was conducted, but nothing more.

It was only last week that we alluded to the gigantic establishme banks, with their numerous branches, as a source of loss, or, at l great absorption of capital, and pointed out that the legitimate busi did not warrant such outlay and expenses, more especially as there is probability of the value of money being materially reduced after harvest, and the main source of income falling off, consequently, to a extent. Indeed, it is a wonder that banks will take money at ca 5 per cent., while there is so trifling a difference between that rate the current value of floating capital; but such is their eagerness for b ness, that risks to any extent are run, and when bad debts are made thing further is said of the matter. The establishment of discount ba moreover, interferes seriously with the profitable part of the busine bankers, and these have come forth in consequence of the capricious m ner in which bankers treat their customers, by often throwing out paper, and yet discounting worthless acceptances for more favoured positors. Much of this feeling has been shown, it is said, at the R British Bank, and some strange revelations are expected to be made the true state of accounts is before the public.

The establishment of discount banks introduces a new and very cri feature in the question of banks generally. The profitable employ of the floating capital is the legitimate business of banks; more espec of those who pay interest on the balances of their depositors, and money at call at high rates. Risks, therefore, must be run, and doub paper is often received; while, as we have already stated, much pers feeling is shown frequently when bills are sent in for discount. If source of profit, therefore, is interfered with, where are the banks to for channels of profit wherewith to meet their enormous expenses, a pay interest to their depositors? It is, therefore, sound doctrine to that if discount banks continue to increase, very serious consequences ensue to the banks generally, and discount banks will necessarily sorted to in preference to other banks, from the fact that all persons to keep secret the accommodation they receive, and particularly from bankers, who are easily alarmed by little causes. It is notorious that, the establishment of joint-stock banks, most firms have two accou one where their chief balance lies, for the sake of the interest allowed the other a mere deposit account, for current expenses of office and p transactions. One discount bank has been in operation for some time is, we are assured, doing extensive business. Another is put forth u the denomination of "The London Discount Company," with limit of liability to shareholders, a fact of itself sufficient to ensure encou ment; but the auspices under which it is introduced are enough to o a very extensive business in the mercantile and commercial world. state, and truly, that "That the introduction of the principle of li liability into the joint-stock system removes the principal obstacle t aggregation of small capitals, and to their application to legitimate rations, such as are contemplated by this company." These estab ments in no way act as private bankers; but we will return to this important subject on a future occasion.

There is evidently a strong disposition to encourage foreign enterpri the detriment of home adventures of a similar class. We have ever cated this illegitimate absorbtion of capital—we have over and over pointed out the fallacy of the system, and the disappointment, if not loss, which invariably ensues. To Russia and Turkey it is now d that Englishmen should turn their attention for the beneficial employ of money in railways, mines, banks, gas-works, water companies, &c., we, therefore, raise our voice against such adventures, and give caut time. It is all very delightful, no doubt, to the *concessionaires*, who c a fortune for the transfer of their interests to the company, that such jects should be promoted, but to the shareholders it is anything but a p ing prospect when they find all their money spent, and that either they lose what they have embarked or must pay up more to maintain their c of benefit. No doubt, in the meantime dividends at the rate of 5 per will be declared half-yearly, for it is the fashion with foreign projec give interest out of capital during the construction of works, but this comes to an end, and when the proprietors have to look matters fa the face, they find themselves without the means of paying even 1 p on the original capital. The expenses are never within the estima then come debentures, preference shares, and all the other conceptio the ingenious, to put off the evil day, and which necessarily leave ba hope for the original proprietors.

A great spirit of speculation and enterprise is evidently about t upon the country, and there are just and legitimate channels for th ployment of capital in our colonies, which will promote the interest mother country, while the different communities will be materially enr Australia and India present fine and wide fields for railway develop and we shall not be surprised to find, when the holidays are over and ness generally resumed at the Stock Exchange, that projects of this will be introduced, and, we hope, encouraged, in preference to those national advancement and prosperity do not form the groundwork.

Railways in Australia would open up every description of wealth ready transit render realisation of profit easy and expeditious. again, is another virgin country for such projects, and her wealth is paratively unknown, and her resources unexplored. Why should then, go to Russia and Turkey to lay out our money? The inhabi are quasi-enemies and anti-British; and although they will encourage construction of railways, the working of mines, and the establish of banks, they will quickly discover means to get the different m into their own hands, or on their own terms, when English m has carried out their plans. Besides, are there not good and rem tive opportunities of laying out capital at home? Look at the mining tricts, where first-class and most promising undertakings are langu for want of money, and where a little further outlay would produce r

of 50 and 100 per cent. instead of 4 and 5 per cent., or, perhaps, *nil*, which was the result of most of the Belgian schemes. The great drawback to British mining has been the fact that the capitals proposed are invariably too small to make a fair development, and when further money is asked for, in the shape of calls, distrust naturally arises, and abandonment often ensues; whereas, if a proper sum had been provided in the first instance, fortune, instead of loss, would have ensued. How constantly it happens that the second party realise fortunes when the first have lost their all, from this simple cause. It is a pity that those who propose these large mining companies for foreign exploration do not do so for home mining. We have always felt assured that if a powerful company were formed for working whole districts, on various veins, that the result would be most remunerative; whereas the different mines, individually, do not prosper, for the reason we have assigned.

We gave, lately, as an instance of the doubtful employment of English capital in foreign enterprise, the position and prospects of the Berlin Water-Works, where, supposing the same result was obtained as in the average of London water-works companies, the benefit would be 4 per cent.; but a more applicable case in the present instance is that of the Namur and Liege Railway, which was provided with money almost entirely from this country. It is notorious that the Belgian railways generally, which were promoted and made through British industry, have been almost utter failures as respects the original proprietors, but that of the Namur and Liege was especially so. A brief *resumé* may, therefore, be useful just now, and make capitalists and others consider before they embark in Russian and Turkish projects. Originally there were 50,000 shares in this notable line, but after various calls had been made, and the public began to see they had made a mistake, the cash requirements were not readily responded to, and ultimately 23,405 shares were forfeited, after having paid an average of 10*l.* per share, or 234,050*l.*, and the remaining 26,595 having kept faith to the full extent of 20*l.* per share, there was necessarily a payment of 531,900*l.* on this head, and a collective original paid-up capital of 765,950*l.*, on which, of course, according to usage in these projects, 4 per cent. interest was paid out of capital. The four great "A's" attached to all railways, in the shape of auditors, arbitrators, accountants, and agents, soon made it apparent, however, that this sum of 700,000*l.* was of no avail as compared with the outlay necessary, and 500,000*l.* more was quickly added as "loan and debentures," which was subsequently increased to about 61,500 "preference" shares of 20*l.* each, nominally, but which were sold at heavy discount, making altogether more than double the proposed capital of 50,000 shares of 20*l.*, or 1,000,000*l.*

The original project has, in fact, passed away. Native opposition was brought to bear so strenuously by connecting and competing lines, that literally the traffic was almost wholly diverted, and the influential direction in London was compelled to succumb, and to transfer the interests to other hands. The "Mons and Manege," the present line, is almost worn out by the immense traffic which now passes over; but it is the Belgian, and not the English capitalist, who will reap the benefit.

The position of the original shareholder is, indeed, most lamentable, for what can be expected when there is a loan of 500,000*l.*, and preference shares to the value stated, to be paid upon before he can participate in dividends. This line, moreover, is 70 miles of the best part of the country, and justified the formation; but such is the sequel of almost all enterprises in foreign countries produced by English capital. We give it as a warning to those who are desirous of doing the same thing in Russia and Turkey; it is a warning also to those who place reliance in estimates of outlay; and if moneyed men embark in such inevitable sources of disappointment or loss, they must submit to the consequences, and blame themselves only. If 70 miles of the finest line in Belgium proved a great loss to the original shareholders, what can be expected in Russia and Turkey?

Whilst we are unwilling to assert that there could be no improvement in the system of legislation usually adopted in this country, we opine that too frequently Acts of Parliaments which, were a fair common sense reading given them, would present few obstacles to being carried out with all the advantages they were intended to afford, are so interpreted by those placed in authority by them as to exhibit every species of objection. According to the system in use some few years since, had the Government desired to have carried a measure of the importance of, and making as many amendments to existing statutes as, the JOINT-STOCK COMPANIES ACT, 1856, instead of the few pages, which were considered sufficient for all purposes in the present instance, we should have been favoured with an immense volume, filled with the most incomprehensible, to the business man, enactments, and abounding with tautology of the worst description; yet it appears that nothing less than the old form will suffice to enlighten the Registrar of Joint-Stock Companies at present in office.

The second clause of the new Act exempts insurance companies from its operation in the clearest possible terms, and the first clause in the fifth part the Act, although repealing the 8th VIC., c. 110, expressly states that "such repeal shall not take effect with respect to any company completely registered under the said Act of the eighth year of her present MAJESTY, until such company has obtained registration under this Act;" yet the Registrar of Joint-Stock Companies refuses to receive the returns made to his office by insurance companies in accordance with the the Act 8th VIC., c. 110, on the plea that the Joint-Stock Companies Act, 1856, fully repeals it. Now, we contend that there can be but one opinion with regard to the conduct of the Registrar—that he has acted improperly; for, even supposing the present Act to repeal the former, there can be no justification in refusing to receive the returns previous to Nov. 3, since no company is compelled to come under the new Act until that date, consequently they are at liberty to carry on their operation under the old law until then, and the Act 7th and 8th VIC., c. 110, cannot be considered repealed with respect to any company, insurance or otherwise, until the new law comes into force.

From these remarks it would appear that the Registrar has acted somewhat too quickly, and such being the case, we are at a loss to know whether to censure or congratulate him on his change of conduct; however, if he but consent to receive the returns from existing insurance companies, and continue to adopt the same speedy, and consequently business-like, course, we shall consider that the balance is decidedly in favour of congratulation, since it will show an evident desire to improve upon the ruinous routine system, which every one having transactions with Government officials have too often to deplore.

The fees payable to the Registrar of Joint-Stock Companies under the Joint-Stock Companies Act, 1856, are—For registration of a company whose nominal capital does not exceed 1000*l.*, 5*l.*; for registration of any existing company constituted otherwise than by complete registration, the same fee is charged. The certificate of registration anew, applicable to companies existing previous to July 14, 1856, is given gratis. For every 1000*l.* of nominal capital after the first 1000*l.*, and up to 100,000*l.*, an additional fee of 5*s.*; for every 1000*l.*, or part of 1000*l.*, after the first 100,000*l.*, 1*s.*; for registration of increase of capital up to 100,000*l.*, 5*s.* per 1000*l.*; beyond 100,000*l.*, 1*s.* per 1000*l.*; registration of any document, or recording any fact, authorised or required, 5*s.*; inspection of each office index (except alphabetical index of company, which may be inspected gratis), 6*d.*; inspection of each volume of the companies' registers, or original document in the general register, 1*s.* The charge for office copies or extracts will be 6*d.* for each folio of 72 words for England; and 6*d.* for each sheet of 200 words in Scotland.

The affairs of the unfortunate ASTURIAN MINING COMPANY are once more to be put in liquidation; the gentlemen who are appointed as liquidators being SENOR DE GRIMALDI, the gerant, M. LEON LILLO, and MR. KENNETH MACKENZIE—the two latter gentlemen representing respectively the French and English proprietary.

We have not been able as yet to obtain any detailed information as to what took place at the general meeting in Paris. It appears, however, that a resolution was come to, that the property should be sold for the benefit of the shareholders, Senor DE GRIMALDI undertaking that, on the day of sale, he would produce a bidder to the extent of 85,000*l.* as a minimum price. This would satisfy the gerant's own claims of 35,000*l.*, and leave 50,000*l.* to be divided amongst the shareholders, being about 4*l.* for every 15*l.* expended. The liquidation is to commence on Oct. 1, and all proceedings are to be terminated by March 1. Full power is given to the gerant to settle the time of sale; but the proceeds must be accounted for by all three of the liquidators, and we trust that when the funds are received they will be immediately divided amongst the unfortunate shareholders, for should they be placed in the strong-box, probably we may hear of the confidential servants of some of the parties again appropriating them.

It would appear that the directors imagined it was possible that a loan might be obtained, or that, if fresh shares were issued, the necessary capital to carry on the works could be raised. We need not say that these plans, almost as soon as they were formed, were abandoned, the management of the ASTURIAN MINING COMPANY—more especially since the offices have been in Paris—not being of that solid nature to induce the British public, gullible though they may be, to invest money in a property which has been returning a profit on paper annually, and involving itself in debt to the manager, auditor, accountant, &c., all these offices being exercised by one and the same individual. Under the present organisation of the company, both these plans were discovered not to be in any way feasible, and, as a natural consequence, the only resource left was to sell the property and endeavour, if possible, to reconstitute the company. The minimum price to be obtained is 85,000*l.*, and this for a property that has cost the English shareholders about 250,000*l.*, which but a few years since they had in their own possession, and might still have retained had they not allowed themselves to be dictated to by the trustees, who handed them over to the tender mercies of foreign guardianship.

For some considerable period no meetings of shareholders or directors have been held in London, and we must state that the executive here have shown a great apathy; in fact, they have been passive while their foreign friends have been active, and the property has all but passed away from them. Who the legal advisers of the English shareholders may be, it is not for us here to enquire, but it it is to be hoped that should any future contracts be made with Senor de GRIMALDI, they will be of a different tenor than the one which transferred the seat of the direction from London to Paris, although two of the trustees were lawyers, and deemed competent persons in their own profession. On Mr. MACKENZIE, who represents the English shareholders, an onerous task devolves, as he must see that full justice is done to them. By this time he should know the antagonist with whom he has to cope; and however binding the agreements entered into may be, should there be any flaw or loop-hole by which any of the clauses can be evaded or set aside, if this should be more favourable to the other parties, they will gladly take advantage of them, and pervert them to their own purposes. Honesty of intention is not, in this instance, only necessary, but considerable firmness, energy, and determination are required, together with the support and encouragement of the English proprietary. Should the property be sold the claims on the company will have to be investigated, and it must then be proved whether the debts that are owing are just; and, at the same time, the authority should be shown by which they were contracted.

We by no means wish that the foreign proprietors should be deprived of their rights. The company has had enough law, what is now required is justice, and this must be rendered to the fullest extent. It does not follow because the possessions of the company are in Spain, that all connected with the association should be corrupt, although cavillers might draw such an inference from one of the liquidators having been an agent of the Duchess of RIANZARES. In the present instance we trust that all will honestly and strictly fulfil their duty; and, although the proprietors will have to make no inconsiderable sacrifice, it will be much better that it should be so, than allow years to pass, as they have hitherto done, without obtaining any return, and seeing their property every year deteriorating in value.

MANUFACTURE OF IRON AND STEEL.

The interest created in the metal trades by the announcement of Mr. Bessemer's discoveries in the manufacture of iron, and the publication of the numerous letters thereon, must attach considerable importance to the mechanical details of that invention, especially when compared with others having the same object; we have, therefore, much pleasure in laying before our readers the following particulars:—

Mr. Bessemer's apparatus consists of a vertical cast-iron cylindrical vessel, or cupola furnace, the interior of which is built in fire-brick. Near the base of the vessel is introduced a series of tuyeres, through which the air is forced, to keep the metal in motion, and thereby retain, or even increase, the heat until every portion of the liquid metal has been thoroughly submitted to the action of the oxygen in the air. Whilst this action is going on in the lower chamber of the vessel, scraps, gate-pieces, and other metal can be placed round the opening into the chamber above the throat, by which means the waste heat is made available for melting the metal for the next charge. The blast-pipe communicates with an annular belt, in which the pipes carrying the tuyeres are inserted. In the chamber above the throat of the furnace an opening is made for the exit of flame and gaseous products, and from this opening the eruption of slag takes place during the boil. A tapping-hole, and a man-hole for facilitating the cleaning and repairing the interior of the vessel, are provided in the lower chamber, and the metal from the blast-furnace flows through an opening about midway between the base and throat of the vessel. The metal having been run in and the blast turned on, rapid ebullition ensues, by which the impurities are thrown up in the form of slag, the refined metal being drawn off and cast into ingots.

From the description, it will be seen that the only material part of Mr. Bessemer's process consists in the introduction of a blast of air below the liquid metal, after it has run from the blast-furnace, but before it has been allowed to cool; for, although we admit that the configuration of the converting vessel is somewhat different to that referred to by Mr. J. G. Martien, in his patent, the fact of Mr. Martien claiming the covering of the gutter or vessel in which the molten metal is submitted to the action of the air, to any extent would effectually prevent Mr. Bessemer claiming for confining the heat more effectually. It is true that in Mr. Martien's patent the place of the tuyeres is supplied by a perforated bottom, which, however, can be so arranged as to produce precisely the same effect as Mr. Bessemer's, and, indeed, it is doubtful whether it would not prove even more effective. In order that the public may judge as to the similarity of the invention, we insert Mr. Martien's specification *in extenso*, but consider Mr. Bessemer's claims are too well known to require the insertion of his specification. We shall, however, be willing to lay any statement Mr. Bessemer may desire to make before our readers, to render the peculiarities of his process better understood.

Mr. Martien in his specification states the object of his invention as—

The purifying of iron when in the liquid state from a blast-furnace, or from a refinery furnace, by means of atmospheric air, or of steam, or vapour of water applied below, and so that it may rise up amongst, and completely penetrate and search every part of, the metal prior to the congelation, or before such liquid metal is allowed to set, or prior to its being run into a reverberatory furnace, in order to its being subjected to puddling, by which means the manufacture of wrought-iron by puddling such purified cast-iron, and also the manufacture of steel therefrom in the ordinary manner, are improved. In place of allowing the melted iron from a blast furnace simply to flow in the ordinary channel or gutter to the bed or moulds, or to refinery or puddling furnaces, in the ordinary manner, he employs channels or gutters, so arranged that numerous streams of air, or of steam, or vapour of water, may be passed through and amongst the melted metal as it flows from a blast furnace. He prefers, in carrying out his invention, that the ordinary process of refining iron by the use of a refinery furnace should be dispensed with, and that the purifying of the iron should be accomplished by subjecting the melted iron from a blast furnace before it is allowed to congeal to the action of streams of air or steam passed up through and amongst the melted metal; at the same time he would state, that where it is preferred by others still to resort to the ordinary refinery process by re-melting, then his invention is to be applied to the melted metal as it flows from such furnace to a bed or moulds, in like manner to what he will now describe as applicable to a blast furnace. The channel or gutter employed may be of any suitable material; but he prefers it to be of cast-iron, the bottom part being made hollow, to receive steam or air, or both. This gutter is perforated with numerous holes, which he prefers to be inclined, so that the streams of air or steam may be forced through the melted metal (as it flows along the gutter) in an oblique direction, but, by preference, in the direction in which the metal flows. This, however, is not essential, as the streams of air and steam may be passed directly up through the melted metal, or the holes may be inclined in the opposite direction, so as to oppose the flow of the melted metal. When hot blast or cold blast is used, he prefers to connect the hollow bottom of the gutter with the air pipes used to supply the blast, and when steam is employed he connects the hollow bottom of the gutter with the boiler used. By these means, the air or steam introduced in the hollow bottom of the gutter below the metal will rise up and be forced through it in numerous streams; or, in place of the gutter being the means of applying streams of air below the fluid iron as it comes from a blast furnace, the moulds or beds into which the melted iron is received may be arranged with means for introducing air or steam below the melted iron, and to divide such air or steam into numerous streams, so that the iron may be purified thereby after it has come from the blast furnace and before the congelation of the liquid metal takes place. The gutter or channel may be covered over for any part of its length, and arranged in a suitable manner to admit of heat being applied to the metal therein; and such is also the case with respect to the moulds or bed, in order that heat may be continued to the fluid metal after it has left the blast furnace, and whilst the process above described of purifying the metal is going on. The iron thus purified may be allowed to cool in the moulds, or it may be run from the gutter, channel, or receiver, into a reverberatory or suitable furnace, to be highly heated therein, and may be puddled in the ordinary manner. He would remark that he is aware that it has before been proposed to use streams of steam in puddling and refinery furnaces in such manner as to come in contact with the surface of the melted metal therein, and it has also been proposed to introduce steam below melted iron when puddling the same. And he mentions these cases in order to state that he makes no claim thereto; but what he claims is, the purifying iron from a blast furnace or a refinery furnace whilst still in a melted state.

It appears that by these methods the loss of iron averages 13 per cent., the loss by the ordinary puddling process being, according to the same authority, from 17 to 25 per cent., and frequently more. Mr. Bessemer asserts that by his process masses of iron can be produced of any size or shape, and of perfectly uniform texture; and that by abridging the process so as to leave sufficient carbon in the metal, steel now worth 50*l.* or 60*l.* may be produced for 10*l.* per ton. The beauty of the theory on which the process is founded cannot be questioned; but it is, nevertheless, doubtful whether the results to be obtained have not been much exaggerated. The efficiency of Mr. Bessemer's process depends upon the iron retaining such a degree of fluidity as will allow of the air penetrating it thoroughly; and as purity and infusibility are produced in the same proportion, the air passing through the molten metal will continually encounter increased solidity, so that the application of additional heat, as Mr. Martien's patent provides for, would in many instances be absolutely necessary. Where it is not so, Mr. Martien's patent undoubtedly allows him to dispense with it.

The mere fact of introducing either air or steam into the puddling furnace is no novelty, but the object has been to regulate the heat rather than for any other purpose. In 1850, Mr. Reuben Plant (Philpotts and Plant), of Dudley, patented an invention to regulate the heat employed in the manufacture of bar or wrought-iron during the process of puddling, and claimed the use of hot or cold blasts with steam jets, and hot or cold blasts with the addition of a damper between the fire and puddling chambers, or with the ordinary damper in the draft of the chimney, to regulate the heat in the said puddling chamber; and the use of hot or cold blasts and steam jets, and steam jets by themselves to regulate the heat in the said puddling and preparatory chambers respectively, instead of the said ordinary damper. The process which had been adopted previous to Mr. Plant's invention, had been to blow the fire, and when steam was used it was merely to increase the heat. Mr. Plant took them conjointly, and if the blast be driven into the furnace, as he proposes, it appears that two very important effects are produced—the heat is increased nearly tenfold—the contrivance forming, in fact, an oxy-hydrogen blowpipe; and by blowing into and upon the surface of the iron tends considerably to carry off the injurious gases, so detrimental to the finished iron; and by this mode of applying steam to reduce the heat the iron is decarbonised, and fibre is given to it.—[Mr. Reuben Plant's invention was fully detailed, with illustrations, in the *Mining Journal* of Jan. 26 and Feb. 7, 1850.]

THE MINING AND INDUSTRIAL INTERESTS OF CORNWALL.

[FROM OUR CORRESPONDENT IN WEST CORNWALL.]

SEPT. 5.—The standard last week stood at 127*l.* 16*s.*, with a produce of 7; in the corresponding week of last month the standard was 127*l.*, with a produce of 6¾. Taking into account the difference of produce, this is a rise of 4*l.* odd on the standard, and of about 6*s.* per ton in the price of ore. This must tend to give increased buoyancy to the share market; and, indeed, business is more brisk, and transactions are more numerous, than for some time past. Wherever samplings are increasing, or improvements are made, opening up good prospects, there is no want of purchasers at advanced prices. From the increasing business in shares, it would seem that mining is on the point of springing up from its former inactivity, and benefiting from a further influx of capital.

Several mines are in an improving state, and attracting purchasers. South Frances is looking exceedingly well. At the account on Monday the profit on the two months was 433*l.*; a dividend of 8*l.* per share was declared, and the balance increased by 36*l.* The mine is likely still further to increase profits; the number and nature of the lodes impart confidence, and shares are from 355*l.* to 360*l.* St. Day United Mines are increasing returns; at the account no call was made, the mines being about meeting costs. These are a very important run of mines, and afford employment to a large number of the population of Gwennap. At a meeting, at Consols, of the adventurers of the United and St. Day United Mines, who some time ago purchased Consols, it was resolved to offer this old and extensive mine for sale by auction. In North Basset shares are about 32*l.* 10*s.*; Wheal Basset about 290*l.* In Wheal Buller eastern shaft there is some most promising gossan, &c.; and, in expectation of a course of ore, the price of shares will probably advance.

At South Tolgus meeting, on Tuesday, there appeared a profit on the two months of 429*l.*, increasing the balance in hand to 755*l.* The mine is looking well, and is likely to pay a dividend early next year. At East Tolgus, the lode continues highly productive in the 22 fm. level, east of engine shaft, and hopes are entertained that the ore will be found in the 34, when sufficiently advanced; the shares have been in considerable demand at about 75*l.* At Wheal Ellen account, the mine was about 580*l.* in debt, and a call of 12*s.* per share was made. The mine is reported to be in a promising condition, and likely to increase samplings. At Wheal Hender, an improvement is reported, by the discovery of a good tin lode. Stray Park is also stated to have improved, and shares have changed hands. West Stray Park from 8*l.* 10*s.* to 9*l.* per share. At South Wheal Ellen bi-monthly account, on Tuesday, the mine was 660*l.* in debt, and a call of 15*s.* per share was made. This debt included 315*l.* on account of the winding and crushing engine. The samplings of ore from this promising mine are fast increasing. North Frances is looking favourable in the 54 fm. level, and in other parts of the mine. Great Alfred will increase samplings; the improvement in the western ground is very encouraging to the adventurers.

From intimations which have appeared in the *Mining Journal*, many mine shareholders have been expecting to see a prospectus for the formation of a new smelting company. Of course, however, any project of the kind must render necessary many preliminary enquiries and considerations. The smelters are in no way alarmed, for they know that many such projects hitherto have come to nothing. After the great dissatisfaction caused by the conduct of the smelters within the last three months, it will be unfortunate if the miners and manufacturers again settle down in apathy, and do nothing to combat the smelters' monopoly. Should this be the end of all the talking and agitation which has taken place, the smelters will be emboldened to turn the screw tighter yet, and make more profits out of the miners than ever.

A praiseworthy example was set by the managers and adventurers of Cook's Kitchen Mine on Saturday. They treated all their underground miners, and those employed at grass, male and female, to a railway excursion to Penzance, accompanied by the agents of the mine and a band. A very agreeable holiday was spent, and good feeling promoted between employer and employed.

Capt. James Miners, of Carn Brea Mine, died on August 27, and was buried on Tuesday last, his funeral being followed by his relatives and friends, and by hundreds of working miners. He was much respected, and was a thoroughly practical miner; he had been twenty-three years agent to the adventurers in Carn Brea Mine, in which the workings are very extensive.

An agricultural report of the harvest in Cornwall states that the crop of wheat is a good average one, much superior to that of last year. During the past week the bulk of the wheat crop has been secured. The barley crop is not so good as the wheat, having ripened too quickly. The oats are reported good in all parts. A plentiful harvest will place the miners and labourers of Cornwall in a much better condition than they have been in during the past year, and will give an impulse, it is hoped, to the trading and mining interests of the county.

The Cornwall Railway Company held their half-yearly meeting at Truro, on Friday, Mr. M. Williams, M.P., in the chair. Since their establishment the company have expended 960,273*l.* in railway works, land, and other expenses; yet they are now in want of further capital to complete the line from Plymouth to Truro, the line from Truro to Falmouth being for the present abandoned, but intended to be made at some future period. From Truro to Liskeard the line is nearly ready for the rails; and from Liskeard to Plymouth the works are so far advanced as to enable the engineers to complete them within the time required for constructing the great bridge over the Tamar at Saltash. This immense work is proceeding slowly, under Mr. Brunel's directions, and no precise time is named for its completion. For the further capital required, the directors are in negociation with the Great Western, Bristol and Exeter, and South Devon Companies, who have a large interest in the Cornwall line. It is much to be regretted that this county, so important for its mineral produce, should so long be isolated from the general railway system of the kingdom.

At the West Cornwall Railway meeting, held at Penzance, on Saturday, Mr. Louis Vigura in the chair, no dividend was declared, the profits over expenses being insufficient for that purpose. The Chairman stated that there was a steady increase of the merchandise traffic; but they could

THE PROGRESS OF MINING IN 1855.
BEING THE TWELFTH ANNUAL REVIEW.
By J. Y. WATSON, F.G.S., Author of the *Compendium of British Mining* (published in 1843), *Gleanings among Mines and Miners*, &c.

A FEW COPIES of the REVIEW OF 1855, containing Statistics of the Metal Trade, the Dividends and Per centage Paid by British and Foreign Mining Companies, and the State and Prospects of upwards of 200 Mines. Also, a FEW COPIES of the REVIEW OF 1852, 1853, and 1854, MAY BE HAD on application at Messrs. WATSON and CUELL'S Mining Offices, 1, St. Michael's-alley, Cornhill, London.
Also, STATISTICS OF THE MINING INTEREST. By W. H. CUELL.

WATSON AND CUELL, MINING AGENTS (Established nearly 20 years), are always in a position to BUY and SELL SHARES in BRITISH MINES, and OFFER THEIR ADVICE in all matters relating to MINING.
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Notices to Correspondents.

*** Much inconvenience having arisen, in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be regularly *filed* on receipt: it then forms an accumulating useful work of reference.

THE COPPER TRADE.—SIR: Mr. T. I. Hill expresses himself rather freely when he says, "Your correspondent gives utterance to a gross absurdity, when he says that 200,000*l.* or 300,000*l.* are necessary to carry on a copper smelting-works." I beg to ask that gentleman to look a little more seriously to the statement made, and he will soon find himself in the greatest error. In the first place, it is neither implied or expressed in the way that Mr. Hill imagines: 200,000*l.* or 300,000*l.* is stated to be necessary, in order to counteract the present baneful influence of the monopolists, who are admitted by Mr. Hill to be very wealthy, and one firm is reported to have as much capital now at work: be that true or otherwise, I will not take upon myself to say. Now, Sir, I cannot see wherein the gross absurdity exists, in stating that 200,000*l.* or 300,000*l.* are required in order to establish an independent miners and consumers' company; and if Mr. Hill can effect such desired independence with a less sum, he is much more clever than I give him credit for. I beg to state most clearly and distinctly, that it is a piece of profound folly to attempt so gigantic a task with anything short of a subscribed capital of 300,000*l.* or 400,000*l.*; for be it remembered that both miners and consumers are alike complaining, and, in order to counteract the influence, works capable of reducing the entire produce must be at hand, or else where is the remedy for an universal evil?—A MINER.

THE MINERS' SMELTING ASSOCIATION.—SIR: "Young Smelter" is again obliged to resort to the *Mining Journal*, and through it to express his thanks for the many important communications he has received during the week; and at the same time to inform the writers and the public at large that there is no doubt of complete success. It was thought much more prudent to commence the movement with care, having a regard to its magnitude, as well as its importance, and thereby obtain the expression of the miners, consumers, and others, in respect to the same, which course is productive of the most satisfactory results.—YOUNG SMELTER.

"Shareholder" (Reigate).—It would be well for persons, previous to their embarking in any undertaking, to ascertain the character of the directors, and to look well to their antecedents: the parties in question are well known. All that we can advise our correspondent is, to make enquiries himself, and then use his own judgment.

WHEAL MARY ANN.—SIR: I regret to observe, in your last Journal, a letter, written by some officious person, relative to this mine, stating that, at our next audit, we can pay the same dividend as at the last meeting—2*l.* per share—and increase the balance in hand 700*l.*, also advising a bonus. This is an erroneous statement, as the abstract of the next audit will prove, when issued. The mine is certainly looking exceeding well, but your officious correspondent has forgotten that the price of lead has gone down considerably. Your inserting this in your next Journal will oblige, fearing the public might be misled.—P. CLYMO, jun.: *Liskeard, Sept.* 2.

JOINT-STOCK COMPANIES ACT, 1856.—SIR: Can any of your legal correspondents inform me whether a company registered with limited liability will be compelled to register their annual balance-sheet with the Registrar of Joint-Stock Companies?—D. A.: *Paris, Sept.* 2.

TRENOW CONSOLS MINE.—"A Shareholder" complains that this mine has been greatly mismanaged; meetings have not been called; and blames the captain for the mode in which he is acting—in fact, intimating that the officials are working in collusion. The address drawn up by Mr. Henry Viner not only deals in generalities, but likewise indulges in vituperation: no cause can be served when such means are adopted. The agent, we believe, has always borne a fair character, and been employed by several influential persons, largely interested in Cornish mining. A plain statement would have engendered greater confidence with the shareholders than a lengthy document, which appears mainly to be alluding to the private affairs of the person who has provoked the spleen of "A Shareholder." We uphold no party or individuals, but we would recommend that if good is to be done, or redress obtained, a different and more sensible course must be pursued.

BUCKLAND CONSOLS—BEDFORD CONSOLS.—SIR: Seeing in your Share List Buckland Consols and Bedford Consols classed with the mines which have sold ores, and knowing them to be young mines, I should thank the manager to inform those interested when they made their first sale, where sampled, what quantity from each mine, and the price per ton.—W. GREENSLADE: *Horrabridge, Sept.* 2.

"T. C. S." (Gloucester-place).—The directors having borrowed the money of the company, without the consent of the shareholders or the other committeemen, would, under the peculiar circumstances of the case, be liable to an indictment for conspiracy, with intent to defraud. Neither of them are men of substance, and any money spent in litigation would be wasted.

THE MINERS' SMELTING ASSOCIATION.—SIR: I need not tell you with what intense anxiety the miners of this county are looking forward to the consummation of the scheme, it being regarded as one of the utmost importance to this great copper-producing district; and if any one thing can contribute to the well-being of it, it is the establishment of smelting upon a much more satisfactory basis than at the present moment, so as to place the mining interest upon a less fluctuating footing, than while it is subject to the influence and caprice of the present monopoly. The subject when first mooted was received with the usual sarcastic sneer of agents and principals of the smelting community; but now they seem to think it a little more stable than "wind," as they were pleased to call it, and serious thoughts of its power and effect are now filling their minds, and coming events are casting their shadows before them. It may be inferred from the quiet but yet skilful movements of "Young Smelter," that he is not quite so young in the affairs of mining and smelting as his present name would indicate. Revolution, and a systematic mode of reformation, in the smelting world opens up a wide field for enterprise, and, when completed, the miners will not fail to express their appreciation of "Young Smelter's" efforts in a much more tangible form than words can possibly convey. To enter upon such a task more than ordinary sagacity and courage is required, and if it will afford the aspirant any satisfaction, I beg to assure him that he has the unanimous sympathy of Cornwall's sons, whose source of income is from the mining world.—ONE INTERESTED: *Redruth, Sept.* 3.

"F. E. H." (Wandsworth).—At Twista, they precipitate the copper with acid in tanks, using scrap-iron with it: in Norway, they have a similar process. As yet it has not been published here, nor has Dr. Nielsen given any account of the acids used, or the quantity required to reduce a ton of copper ore.

WHEAL EMMA—MR. N. ENNOR AND CAPT. JEHU HITCHINS.—We have received from Mr. Ennor a very lengthy communication, entering into various circumstances in which both gentlemen have been concerned; but the matters treated are of too personal a nature for publication, and not being in any way calculated to lead to a satisfactory solution of the points at issue, we must decline its insertion. We hope to hear from our correspondent on a more practical topic, and one of general interest to our readers.

THE NEW JOINT-STOCK COMPANIES ACT, 1856.—SIR: A most important clause is inserted in this Act, clearly proving, in my opinion, the loose manner in which our Legislature is conducted. All companies not within the jurisdiction of the Stannaries, or under a special Act of Parliament, are compelled to register under the Act in question; but they have the option of being "limited" or "unlimited;" and it appears to me an anomaly that any board of directors should have the power to register a company with unlimited liability without the consent of the shareholders; whilst on the other hand, if the liability is to be "limited," it is necessary to call a public meeting, and obtain the consent of the shareholders.—J. H.: *Southampton, Sept.* 3.—[Our correspondent must desire a most remarkable piece of legislation, if he considers the directors should have the power to alter the entire constitution of the company at their discretion. The effect of the clause to which he evidently alludes will undoubtedly be to subject every company not within the Stannaries, or working under Royal Charter or Private Act, to its provisions, whether a meeting of shareholders be called or not; but it is not a question of limited or unlimited liability, since it would be equally impossible for the directors of a company under the Limited Liability Act, 1855, to register with unlimited liability, without calling a general meeting, although no meeting would be required to enable them to register with limited liability. The fact, then, is that whilst the Act provides that all companies, with the exception of those above referred to, permits the constitution of the company to remain materially the same, unless the shareholders themselves desire to change it, and as all companies not under the Act of 1855 have unlimited liability, a meeting is requisite to render the liability limited.—ED. *M. J.*]

"T. S." (Rothwell).—Great neglect has been shown in too many instances by the managers of collieries, and many of them have a great distaste and dislike to those who draw attention to the dreadful accidents which lately have been of such frequent occurrence. The publication of a communication of so old a date would at present tend to no useful purpose. Much has been written on the subject recently, and afforded a quantity of new and useful information.

SHARE ADVERTISERS.—SIR: The numerous complaints which have been constantly received on this subject, are sufficient to raise a loud cry against the gross injustice and dishonesty, not only against more honourable brokers, but the public generally. The several parties who advertise prices to shares are well known to the mining market as not being in a position to hold the shares they profess to sell, nor to supply them if applied for—as numberless instances every week bring to notice. These advertisers generally are unknown but by the names attached to their advertisements; and if the public were only to make enquiry into their antecedents, as well as present position, they would very soon condemn the gross and fictitious system pursued. The object, too, appears to me to be a very unbusiness-like method of procuring a correspondence; being unknown to the mining public, and without the means or ability of establishing a connection in an honourable or legitimate way, they quote prices, as sellers, considerably below the real market figure, and on receiving applications from parties who are ignorant of their standing, are informed that the stock is sold, they must communicate with their clients, or attempt to pass off some worthless shares in exchange, so otherwise to secure a correspondence. I do not object to a fair competition, when conducted with honour or principle, but the practice pursued is one to be condemned by every honourable man. If, Mr. Editor, this unjustifiable course be continued, I shall, in an early Journal, with your permission, furnish you with numerous instances of gross and infamous proceedings, which you, with your knowledge of business, will readily term "swindling." Your correspondent, referred to in last week's Journal, mentioned a circumstance wherein he states that he purchased and paid for two Rosewarne's 12 months since, and has not yet received the shares. Now, I do consider that, in justice to the more honourable brokers, his name should be publicly given, so that the innocent should not suffer with the guilty, and he receive the well-merited punishment of public condemnation. I much regret that I should have to complain of those who by their dishonourable proceedings assist in bringing down upon the legitimacy of the mining interest that odium which the few well-known brokers have strenuously endeavoured to avoid by a long career of honesty and integrity.—LOOKER-ON.

NORTH STAFFORDSHIRE COLLIERY.—SIR: Can any of your readers inform me whether there is now extant any company bearing the title of the North Staffordshire Colliery, or if it is incorporated with any other company. I have documents bearing the above title, dated Aug. 30, 1839, but they contain no address.—J. E.: *Sept.* 4.

ADVERTISING PRICES FOR MINE SHARES.—SIR: As a contribution to the censure on some of the advertising brokers, who seek to delude the unwary into sales, I may mention that one man wrote me that undoubtedly he could procure Cwm Daren at 1s. per share, upon which I ordered 50, but I have never received a reply. Another said he could get Cubert shares at 2s. 6d.; I ordered some, but the reply was that although quoted at 2s. 6d. there was none for sale. From another party I ordered some Great Sheba shares, at three times the price quoted in a list in your Journal, but there were none of them to be had at all. PORT PHILLIP shares, although scratched entirely out, are not to be bought for 5s. each.—JUSTITIA: *Stourport, Sept.* 4.

MALLEABILITY OF GOLD.—SIR: In the last paragraph of my communication, in last week's Journal, my meaning has been perverted by the omission of a word or two, and rendered inconsistent with the context. I did not state, nor mean to state, that much more gold might be separated than at present, for that form of sentence would include amalgamating processes, which should have been excepted, and which exception was implied by the words omitted. My meaning was, that by stamping the soil before submitting it to amalgamating processes more gold might be obtained in the first instance by hand alone, than is at present the case.—A. A.

CARN VIVIAN.—SIR: I should feel obliged if any of your correspondents would advise the shareholders of this mine how to act under the following circumstances:—At a meeting of shareholders held on the mine two months since, which I attended, it was agreed to unanimously that the driving of a shallow level should be immediately suspended, which was done accordingly, there and then, in the presence of some of the company who inspected it. In the interim between that meeting and another held on Wednesday last, however, Mr. Bray, of Bodmin, the purser, and another shareholder, representing between them one-fourth of the mine, still continued the interdicted driving, which is of no use to the Carn Vivian shareholders, and only done to prove some ground in an adjoining sett, which has been taken up separately from the Carn Vivian property.—B. R. S.: *Liskeard, Sept.* 4.

"ON QUARTZ CRUSHING AND GOLD EXTRACTION—WHICH IS THE BEST MACHINE?"—SIR: The above forms the subject of a letter in your useful Journal of August 30, signed W. Radley, Ch.E., criticising and slaughtering all machines hitherto constructed, placing Britten's *hors de combat*, though easy of improved reconstruction, and endeavouring boldly to completely canonise S. T. Jones's, first, by calling it "that unfinished patent;" and secondly, by exploding against it his 4th, 5th, 6th, 10th, and 13th canon, which fall inocuous, through the ignorance evinced of the various practical applications and merits of S. T. Jones's gold extracting machine, for which Her Majesty's Royal Letters Patent, with the Great Seal attached, were obtained many months prior to the date of Mr. Radley's specification, of June 20 last.—S. T. JONES: 3, *Copthal-buildings, Sept.* 4.

TRENOW CONSOLS.—SIR: Mr. Henry Viner, Professor of Music, of Penzance, has issued a circular to the shareholders, animadverting most strongly on the conduct of Capt. Richards, who bears a very estimable character. One ground of complaint against him is, that he recommended the committee to stop Wheal Margery; he sold his shares then at 30s. each, they are now worth over 30*l.* He cites Wheal Alfred and Providence Mine, in all three of which Capt. Richards has been a loser. He may, probably, accuse that gentleman of errors in judgment, but he certainly bears testimony to his honesty of purpose. Previous to Mr. Viner's communication I knew nothing of him. However musical his capabilities may be, I do not consider it a proof of mining abilities. The assumptions he puts forward are singular, to use the mildest term, and the power attempted to be grasped by one shareholder enormous. It would be as well that his co-adventurers, before they entrust him with such authority, should know whether he is capable of exercising it, and if the alleged abuses exist. Capt. Richards is known to be a man of considerable experience, and has been employed in seven good mines. If Mr. Viner wishes his brother adventurers to co-operate with him, he should lay before them a lucid and business-like account, instead of a rambling statement of personalities, without any substantiation.—AN ADVENTURER: *Sept.* 2.

WHEAL LUDCOTT.—SIR: We are much surprised that this young but promising concern is never reported on in your Journal for the benefit of distant shareholders, who can have no means whatever of gleaning any information as to general appearances except from the reports presented at the quarterly meeting. It is well-known that during an interval of three months great and important changes frequently occur, and whether for better or worse, ought to be made known. There is now a resident agent on the mine fully capable of reporting, which we hope will be attended to after this hint from—A SHAREHOLDER: *Liskeard, Sept.* 4.

"C. A." (Tamaw).—A letter addressed to Mr. Wm. Mickle, Willington, Durham, will reach that gentleman.

WHEAL GUSKUS.—SIR: I understand that a meeting of this company is shortly to be held. We have fortunately got rid of the incubus of a director who resided some hundreds of miles from the scene of operations, as well as the London offices. The committee now are easily reached, and can be summoned to their duties without the intervention of postal delays and telegraphic messages. The property is good, and if the shareholders have spirit enough to develop the new copper lode, all may go well. If they would look after their own interests, let them attend the next meeting, and then decide on what is to be done. This, however, is not to be effected by resolutions on paper, but an energetic working is necessary; and whatever is then arranged should be carried out. Both directors and the general body of shareholders have talked enough: what we now require is work, and that done speedily.—AN OLD SHAREHOLDER: *Dublin, Sept.* 3.

WHEAL EMMA (Buckfastleigh).—Mr. Christopher Robins having signed his letter, he has a right to expect that any reply made thereto should be similarly authenticated. "Q. S." must, therefore, attach his name to future communications on this favourite topic of censure.

WHEAL ZION MINING COMPANY.—SIR: I wish to know if the late call of 5*s.* per share was paid. The directors, some time since, issued a circular, threatening to hand the names of defaulters to merchant creditors. It would be as well if the purser would inform us, previous to the next meeting, whether all the committee have paid their calls: before they ask us, they should surely look at home. Recent transactions in banks, insurance companies, &c., have made me look with a suspicious eye on directors. The Master in Chancery and the official manager have informed us that many companies are solely concocted for the benefit of directors and promoters; and when these are wound-up, we find the shareholders have to contribute, while the directors have been obtaining a good living at their expense. I by no means wish to infer that this is the case in this mine; the prospects of the mine were stated to me by a member of the Mining Exchange to be of a different nature than they have proved, which if I had studied the reports published weekly in your Journal would have shown. I shall be willing to pay all that is due, when I see others have done the same. I shall attend the meeting when summoned, and conclude this letter with the advice that "those who live in glass houses should never throw stones."—CLERICUS: *Bath, Sept.* 4.

WHEAL HENDER.—The report published last week under the name of "Rosewarne" should have been "Wheal Hender."

THE MINING JOURNAL
Railway and Commercial Gazette.

LONDON, SEPTEMBER 6, 1856.

We remarked last week that a strong impression existed in the minds of many, who keep a careful watch over passing events and of coming matters, that the position of the joint-stock banks, as well as of private banks, was not so encouraging as the published statements would seem to warrant, and that a crisis would soon occur in this department of British enterprise. In this feeling we joined, and we were not, therefore, surprised to hear of the suspension, or failure, of the ROYAL BRITISH BANK, which took place on Wednesday.

Apart from the general question of banking in the present state of affairs, there were special indications connected with the Royal British Bank which cautious people clearly saw through, and hence that rapid fall, within a month, of from 47 to 23 in the price of the shares; as well as the fact of the numerous transfers of accounts since the general meeting of its proprietary, which was held on Aug. 15. Our business in reference to this matter is not, however, as respects individual cases, but as a comparative question with mining, to show that the latter presents much more lucrative results, with the certainty of limitation of liability, while the former gives no security to the shareholder, and that the benefit is an uncertain interest of 4, 5, 6, or perhaps 10 per cent. We alluded generally to banking, insurance, and railway companies, and continuing our series of articles on this head, we will be able to show the soundness of our views. Mining is deprecated frequently as a ruinous investment, or unwarrantable speculation, yet, as we have already shown, the whole amount absorbed in all the different mines is a mere tithe as compared with other sources of enterprise; even as compared to existing undertakings in the different branches, and if we could ascertain the capital lost in defunct associations, the difference would be starling indeed.

It was our intention to have gone minutely into banking, railway, and insurance statistics on the present occasion, but the huge mass of figures which they present renders it a task not quickly accomplished, and we must defer details for another week.

The phase which has come over all these three classes during the past week, or within the last month, is substantial confirmation of the wisdom of those who do not put their faith in the infallibility of such establishments. At the recent meeting of the shareholders of the Royal British Bank a dividend of 4 per cent. was declared, and their assets set forth as 810,204*l.*, as against 842,428*l.* of liabilities to depositors, or a difference of only 32,224*l.* in the event of the whole of the money being called for. The sequel shows the utter fallacy of these figures, and it now becomes a very serious question as to the conduct of those directors and the manager who retired at the meeting, for they must have been cognizant of the real state of their affairs, and that the balance-sheet was fabulous as respects the power of the bank to meet its engagements. The Royal British Bank, however, is not a solitary example of this most unjustifiable course of mystifying accounts: it is the general practice. At all the meetings, and in all the statements put forth by the managers, we hear a great deal of the large profits which have accrued since "the directors had the pleasure of meeting the shareholders;" but is there any one instance of the losses being shown, or the doubtful securities set forth that the balance profit may be determined? The fact is, that it is the variable practice to embrace in the "assets" every description of account whether good, bad, or doubtful; and even dishonoured acceptances still carried forward as "assets," as long as there is a shadow of a chance of any of the persons whose names are attached being able to pay or compromise. This is a most unsound system; it is, indeed, a deception which nothing justifies; and the case of the Royal British Bank will throw some light on this scandalous principle, which is so universally adopted by joint-stock banks, railway, and insurance companies. If mining undertakings were to pursue such a course, what an outcry there would be! The hardest language would be applied; they would be described as swindlers; and yet these leviathan establishments do it with impunity, as a mere matter of course. It is, however, the usual way in this country—little offenders are severely punished for the slightest delinquency; but great transgressors are justified in any means if they attain the end.

Retribution quickly follows, nevertheless, and the glossing over of errors and losses does always tell, sooner or later. Look at the consequences which will possibly accrue to the unfortunate shareholders in the Royal British Bank. No legislative enactment limits their liability; every shareholder is responsible to the last shilling he possesses, and for what has he incurred this frightful risk and responsibility? For a dividend of 4 per cent., made up, perhaps, from capital account. Now, the whole of the paid-up capital has vanished into air, it is said, and there is every probability of the unfortunate shareholders being called upon largely to pay the deposit accounts. Of these, it appears, there are 42 widows and unmarried persons. Where is there a parallel case in mining? Where has such an enormous sum been lost, and where have 42 widows and spinsters in one enterprise, lost all their investment, and, perhaps, been brought to beggary and ruin?

The liabilities of this bank to depositors alone is more than half the amount of the whole capital of the 94 dividend-paying mines enumerated in former remarks, but in which the original capital has not only been turned four times over in dividends, but the shares continue at enormous premiums, so that if the original shareholders realised they would have received 10*l.*, 20*l.*, and even much more, for every 1*l.* laid out. Is it unaccountable, therefore, that mining should be decried, and other affairs which entail such frightful distress, upheld? The fallacy is being seen through, no doubt; the mania for banking is passing away, and the violent shocks must tell on the general question. We have long said that better times were gradually coming over mining—that the public large was beginning to regard it in a very different light.

By those who carp against mining with unceasing energy, it will be said that the ruin of the Royal British Bank is attributable to mining; this, however, dispassionate minds will demur, for although it appears true that 100,000*l.* have been lent by the bank to an iron company must be special pleading, indeed, to render this, "mining," in the usual acceptation of the term. It is evidence, truly, of the unsound manner which the business was conducted, but nothing more.

It was only last week that we alluded to the gigantic establishments banks, with their numerous branches, as a source of loss, or, at least, great absorption of capital, and pointed out that the legitimate business did not warrant such outlay and expenses, more especially as there is no probability of the value of money being materially reduced after harvest, and the main source of income falling off, consequently, to a great extent. Indeed, it is a wonder that banks will take money at call at 5 per cent., while there is so trifling a difference between that rate and the current value of floating capital; but such is their eagerness for business, that risks to any extent are run, and when bad debts are made nothing further is said of the matter. The establishment of discount banks, moreover, interferes seriously with the profitable part of the business of bankers, and these have come forth in consequence of the capricious manner in which bankers treat their customers, by often throwing out their paper, and yet discounting worthless acceptances for more favoured depositors. Much of this feeling has been shown, it is said, at the Royal British Bank, and some strange revelations are expected to be made when the true state of accounts is before the public.

The establishment of discount banks introduces a new and very critical feature in the question of banks generally. The profitable employment of the floating capital is the legitimate business of banks; more especially of those who pay interest on the balances of their depositors, and lend money at call at high rates. Risks, therefore, must be run, and doubtful paper is often received; while, as we have already stated, much perplexity feeling is shown frequently when bills are sent in for discount. If this source of profit, therefore, is interfered with, where are the banks to look for channels of profit wherewith to meet their enormous expenses, and pay interest to their depositors? It is, therefore, sound doctrine to state that if discount banks continue to increase, very serious consequences must ensue to the banks generally, and discount banks will necessarily be resorted to in preference to other banks, from the fact that all persons desire to keep secret the accommodation they receive, and particularly from their bankers, who are easily alarmed by little causes. It is notorious that, since the establishment of joint-stock banks, most firms have two accounts, one where their chief balance lies, for the sake of the interest allowed, the other a mere deposit account, for current expenses of office and general transactions. One discount bank has been in operation for some time, that is, we are assured, doing extensive business. Another is put forth under the denomination of "The London Discount Company," with limited of liability to shareholders, a fact of itself sufficient to ensure encouragement; but the auspices under which it is introduced are enough to ensure a very extensive business in the mercantile and commercial world. It states, and truly, that "That the introduction of the principle of limited liability into the joint-stock system removes the principal obstacle to the aggregation of small capitals, and to their application to legitimate operations, such as are contemplated by this company." These establishments in no way act as private bankers; but we will return to this important subject on a future occasion.

There is evidently a strong disposition to encourage foreign enterprise to the detriment of home adventures of a similar class. We have ever dedicated this illegitimate absorbtion of capital—we have over and over again pointed out the fallacy of the system, and the disappointment, if not loss, which invariably ensues. To Russia and Turkey it is now due that Englishmen should turn their attention for the beneficial employment of money in railways, mines, banks, gas-works, water companies, &c. &c., we, therefore, raise our voice against such adventures, and give caution in time. It is all very delightful, no doubt, to the *concessionaires*, who clear a fortune for the transfer of their interests to the company, that such projects should be promoted, but to the shareholders it is anything but a pleasing prospect when they find all their money spent, and that either they lose what they have embarked or must pay up more to maintain their claim of benefit. No doubt, in the meantime dividends at the rate of 5 per cent. will be declared half-yearly, for it is the fashion with foreign projectors to give interest out of capital during the construction of works, but this comes to an end, and when the proprietors have to look matters fairly in the face, they find themselves without the means of paying even 1 per cent. on the original capital. The expenses are never within the estimate, then come debentures, preference shares, and all the other conceptions of the ingenious, to put off the evil day, and which necessarily leave but little hope for the original proprietors.

A great spirit of speculation and enterprise is evidently about to burst upon the country, and there are just and legitimate channels for the employment of capital in our colonies, which will promote the interests of the mother country, while the different communities will be materially enriched. Australia and India present fine and wide fields for railway development, and we shall not be surprised to find, when the holidays are over and business generally resumed at the Stock Exchange, that projects of this nature will be introduced, and, we hope, encouraged, in preference to those of international advancement and prosperity do not form the groundwork.

Railways in Australia would open up every description of wealth, for ready transit render realisation of profit easy and expeditious. India, again, is another virgin country for such projects, and her wealth is comparatively unknown, and her resources unexplored. Why should capital, then, go to Russia and Turkey to lay out our money? The inhabitants of which are quasi-enemies and anti-British; and although they will encourage the construction of railways, the working of mines, and the establishment of banks, they will quickly discover means to get the different undertakings into their own hands, or on their own terms, when English capital has carried out their plans. Besides, are there not good and remunerative opportunities of laying out capital at home? Look at the mining districts, where first-class and most promising undertakings are languishing for want of money, and where a little further outlay would produce rich

of 50 and 100 per cent. instead of 4 and 5 per cent., or, perhaps, *nil*, which was the result of most of the Belgian schemes. The great drawback to British mining has been the fact that the capitals proposed are invariably too small to make a fair development, and when further money is asked for, in the shape of calls, distrust naturally arises, and abandonment often ensues; whereas, if a proper sum had been provided in the first instance, fortune, instead of loss, would have ensued. How constantly it happens that the second party realise fortunes when the first have lost their all, from this simple cause. It is a pity that those who propose these large mining companies for foreign exploration do not do so for home mining. We have always felt assured that if a powerful company were formed for working whole districts, on various veins, that the result would be most remunerative; whereas the different mines, individually, do not prosper, for the reason we have assigned.

We gave, lately, as an instance of the doubtful employment of English capital in foreign enterprise, the position and prospects of the Berlin Water-Works, where, supposing the same result was obtained as in the average of London water-works companies, the benefit would be 4 per cent.; but a more applicable case in the present instance is that of the Namur and Liege Railway, which was provided with money almost entirely from this country. It is notorious that the Belgian railways generally, which were promoted and made through British industry, have been almost utter failures as respects the original proprietors, but that of the Namur and Liege was especially so. A brief *resumé* may, therefore, be useful just now, and make capitalists and others consider before they embark in Russian and Turkish projects. Originally there were 50,000 shares in this notable line, but after various calls had been made, and the public began to see they had made a mistake, the cash requirements were not readily responded to, and ultimately 23,405 shares were forfeited, after having paid an average of 10*l.* per share, or 234,050*l.*, and the remaining 26,595 having kept faith to the full extent of 20*l.* per share, there was necessarily a payment of 531,900*l.* on this head, and a collective original paid-up capital of 765,950*l.*, on which, of course, according to usage in these projects, 4 per cent. interest was paid out of capital. The four great "A's" attached to all railways, in the shape of auditors, arbitrators, accountants, and agents, soon made it apparent, however, that this sum of 700,000*l.* was of no avail as compared with the outlay necessary, and 500,000*l.* more was quickly added as "loan and debentures," which was subsequently increased to about 61,500 "preference" shares of 20*l.* each, nominally, but which were sold at heavy discount, making altogether more than double the proposed capital of 50,000 shares of 20*l.*, or 1,000,000*l.*

The original project has, in fact, passed away. Native opposition was brought to bear so strenuously by connecting and competing lines, that literally the traffic was almost wholly diverted, and the influential direction in London was compelled to succumb, and to transfer the interests to other hands. The "Mons and Manege," the present line, is almost worn out by the immense traffic which now passes over; but it is the Belgian, and not the English capitalist, who will reap the benefit.

The position of the original shareholder is, indeed, most lamentable, for what can be expected when there is a loan of 500,000*l.*, and preference shares to the value stated, to be paid upon before he can participate in dividends. This line, moreover, is 70 miles of the best part of the country, and justified the formation; but such is the sequel of almost all enterprises in foreign countries produced by English capital. We give it as a warning to those who are desirous of doing the same thing in Russia and Turkey; it is a warning also to those who place reliance in estimates of outlay; and if moneyed men embark in such inevitable sources of disappointment or loss, they must submit to the consequences, and blame themselves only. If 70 miles of the finest line in Belgium proved a great loss to the original shareholders, what can be expected in Russia and Turkey?

Whilst we are unwilling to assert that there could be no improvement in the system of legislation usually adopted in this country, we opine that too frequently Acts of Parliaments which, were a fair common sense reading given them, would present few obstacles to being carried out with all the advantages they were intended to afford, are so interpreted by those placed in authority by them as to exhibit every species of objection. According to the system in use some few years since, had the Government desired to have carried a measure of the importance of, and making as many amendments to existing statutes as, the JOINT-STOCK COMPANIES ACT, 1856, instead of the few pages, which were considered sufficient for all purposes in the present instance, we should have been favoured with an immense volume, filled with the most incomprehensible, to the business man, enactments, and abounding with tautology of the worst description; yet it appears that nothing less than the old form will suffice to enlighten the Registrar of Joint-Stock Companies at present in office.

The second clause of the new Act exempts insurance companies from its operation in the clearest possible terms, and the first clause in the fifth part the Act, although repealing the 8th VIC., c. 110, expressly states that "such repeal shall not take effect with respect to any company completely registered under the said Act of the eighth year of her present MAJESTY, until such company has obtained registration under this Act;" yet the Registrar of Joint-Stock Companies refuses to receive the returns made to his office by insurance companies in accordance with the the Act 8th VIC., c. 110, on the plea that the Joint-Stock Companies Act, 1856, fully repeals it. Now, we contend that there can be but one opinion with regard to the conduct of the Registrar—that he has acted improperly; for, even supposing the present Act to repeal the former, there can be no justification in refusing to receive the returns previous to Nov. 3, since no company is compelled to come under the new Act until that date, consequently they are at liberty to carry on their operation under the old law until then, and the Act 7th and 8th VIC., c. 110, cannot be considered repealed with respect to any company, insurance or otherwise, until the new law comes into force.

From these remarks it would appear that the Registrar has acted somewhat too quickly, and such being the case, we are at a loss to know whether to censure or congratulate him on his change of conduct; however, if he but consent to receive the returns from existing insurance companies, and continue to adopt the same speedy, and consequently business-like, course, we shall consider that the balance is decidedly in favour of congratulation, since it will show an evident desire to improve upon the ruinous routine system, which every one having transactions with Government officials have too often to deplore.

The fees payable to the Registrar of Joint-Stock Companies under the Joint-Stock Companies Act, 1856, are—For registration of a company whose nominal capital does not exceed 1000*l.*, 5*l.*; for registration of any existing company constituted otherwise than by complete registration, the same fee is charged. The certificate of registration anew, applicable to companies existing previous to July 14, 1856, is given gratis. For every 1000*l.* of nominal capital after the first 1000*l.*, and up to 100,000*l.*, an additional fee of 5*s.*; for every 1000*l.*, or part of 1000*l.*, after the first 100,000*l.*, 1*s.*; for registration of increase of capital up to 100,000*l.*, 5*s.* per 1000*l.*; beyond 100,000*l.*, 1*s.* per 1000*l.*; registration of any document, or recording any fact, authorised or required, 5*s.*; inspection of each office index (except alphabetical index of company, which may be inspected gratis), 6*d.*; inspection of each volume of the companies' registers, or original document in the general register, 1*s.* The charge for office copies or extracts will be 6*d.* for each folio of 72 words for England; and 6*d.* for each sheet of 200 words in Scotland.

The affairs of the unfortunate ASTURIAN MINING COMPANY are once more to be put in liquidation; the gentlemen who are appointed as liquidators being SENOR DE GRIMALDI, the gerant, M. LEON LILLO, and Mr. KENNETH MACKENZIE—the two latter gentlemen representing respectively the French and English proprietary.

We have not been able as yet to obtain any detailed information as to what took place at the general meeting in Paris. It appears, however, that a resolution was come to, that the property should be sold for the benefit of the shareholders, Senor DE GRIMALDI undertaking that, on the day of sale, he would produce a bidder to the extent of 85,000*l.* as a minimum price. This would satisfy the gerant's own claims of 35,000*l.*, and leave 50,000*l.* to be divided amongst the shareholders, being about 4*l.* for every 15*l.* expended. The liquidation is to commence on Oct. 1, and all proceedings are to be terminated by March 1. Full power is given to the gerant to settle the time of sale; but the proceeds must be accounted for by all three of the liquidators, and we trust that when the funds are received they will be immediately divided amongst the unfortunate shareholders, for should they be placed in the strong-box, probably we may hear of the confidential servants of some of the parties again appropriating them.

It would appear that the directors imagined it was possible that a loan might be obtained, or that, if fresh shares were issued, the necessary capital to carry on the works could be raised. We need not say that these plans, almost as soon as they were formed, were abandoned, the management of the ASTURIAN MINING COMPANY—more especially since the offices have been in Paris—not being of that solid nature to induce the British public, gullible though they may be, to invest money in a property which has been returning a profit on paper annually, and involving itself in debt to the manager, auditor, accountant, &c., all these offices being exercised by one and the same individual. Under the present organisation of the company, both these plans were discovered not to be in any way feasible, and, as a natural consequence, the only resource left was to sell the property and endeavour, if possible, to reconstitute the company. The minimum price to be obtained is 85,000*l.*, and this for a property that has cost the English shareholders about 250,000*l.*, which but a few years since they had in their own possession, and might still have retained had they not allowed themselves to be dictated to by the trustees, who handed them over to the tender mercies of foreign guardianship.

For some considerable period no meetings of shareholders or directors have been held in London, and we must state that the executive here have shown a great apathy; in fact, they have been passive while their foreign friends have been active, and the property has all but passed away from them. Who the legal advisers of the English shareholders may be, it is not for us here to enquire, but it it is to be hoped that should any future contracts be made with Senor de GRIMALDI, they will be of a different tenor than the one which transferred the seat of the direction from London to Paris, although two of the trustees were lawyers, and deemed competent persons in their own profession. On Mr. MACKENZIE, who represents the English shareholders, an onerous task devolves, as he must see that full justice is done to them. By this time he should know the antagonist with whom he has to cope; and however binding the agreements entered into may be, should there be any flaw or loop-hole by which any of the clauses can be evaded or set aside, if this should be more favourable to the other parties, they will gladly take advantage of them, and pervert them to their own purposes. Honesty of intention is not, in this instance, only necessary, but considerable firmness, energy, and determination are required, together with the support and encouragement of the English proprietary. Should the property be sold the claims on the company will have to be investigated, and it must then be proved whether the debts that are owing are just; and, at the same time, the authority should be shown by which they were contracted.

We by no means wish that the foreign proprietors should be deprived of their rights. The company has had enough law, what is now required is justice, and this must be rendered to the fullest extent. It does not follow because the possessions of the company are in Spain, that all connected with the association should be corrupt, although cavillers might draw such an inference from one of the liquidators having been an agent of the Duchess of RIANZARES. In the present instance we trust that all will honestly and strictly fulfil their duty; and, although the proprietors will have to make no inconsiderable sacrifice, it will be much better that it should be so, than allow years to pass, as they have hitherto done, without obtaining any return, and seeing their property every year deteriorating in value.

MANUFACTURE OF IRON AND STEEL.

The interest created in the metal trades by the announcement of Mr. Bessemer's discoveries in the manufacture of iron, and the publication of the numerous letters thereon, must attach considerable importance to the mechanical details of that invention, especially when compared with others having the same object; we have, therefore, much pleasure in laying before our readers the following particulars:—

Mr. Bessemer's apparatus consists of a vertical cast-iron cylindrical vessel, or cupola furnace, the interior of which is built in fire-brick. Near the base of the vessel is introduced a series of tuyeres, through which the air is forced, to keep the metal in motion, and thereby retain, or even increase, the heat until every portion of the liquid metal has been thoroughly submitted to the action of the oxygen in the air. Whilst this action is going on in the lower chamber of the vessel, scraps, gate-pieces, and other metal can be placed round the opening into the chamber above the throat, by which means the waste heat is made available for melting the metal for the next charge. The blast-pipe communicates with an annular belt, in which the pipes carrying the tuyeres are inserted. In the chamber above the throat of the furnace an opening is made for the exit of flame and gaseous products, and from this opening the eruption of slag takes place during the boil. A tapping hole, and a man-hole for facilitating the cleaning and repairing the interior of the vessel, are provided in the lower chamber, and the metal from the blast-furnace flows through an opening about midway between the base and throat of the vessel. The metal having been run in and the blast turned on, rapid ebullition ensues, by which the impurities are thrown up in the form of slag, the refined metal being drawn off and cast into ingots.

From the description, it will be seen that the only material part of Mr. Bessemer's process consists in the introduction of a blast of air below the liquid metal, after it has run from the blast-furnace, but before it has been allowed to cool; for, although we admit that the configuration of the converting vessel is somewhat different to that referred to by Mr. J. G. Martien, in his patent, the fact of Mr. Martien claiming the covering of the gutter or vessel in which the molten metal is submitted to the action of the air, to any extent would effectually prevent Mr. Bessemer claiming for confining the heat more effectually. It is true that in Mr. Martien's patent the place of the tuyeres is supplied by a perforated bottom, which, however, can be so arranged as to produce precisely the same effect as Mr. Bessemer's, and, indeed, it is doubtful whether it would not prove even more effective. In order that the public may judge as to the similarity of the invention, we insert Mr. Martien's specification *in extenso*, but consider Mr. Bessemer's claims are too well known to require the insertion of his specification. We shall, however, be willing to lay any statement Mr. Bessemer may desire to make before our readers, to render the peculiarities of his process better understood.

Mr. Martien in his specification states the object of his invention as—

The purifying of iron when in the liquid state from a blast-furnace, or from a refinery furnace, by means of atmospheric air, or of steam, or vapour of water applied below, and so that it may rise up amongst, and completely penetrate and search every part of, the metal prior to the congelation, or before such liquid metal is allowed to set, or prior to its being run into a reverberatory furnace, in order to its being subjected to puddling, by which means the manufacture of wrought-iron by puddling such purified cast-iron, and also the manufacture of steel therefrom in the ordinary manner, are improved. In place of allowing the melted iron from a blast furnace simply to flow in the ordinary channel or gutter to the bed or moulds, or to refinery or puddling furnaces, in the ordinary manner, he employs channels or gutters, so arranged that numerous streams of air, or of steam, or vapour of water, may be passed through and amongst the melted metal as it flows from a blast furnace. He prefers, in carrying out his invention, that the ordinary process of refining iron by the use of a refinery furnace should be dispensed with, and that the purifying of the iron should be accomplished by subjecting the melted iron from a blast furnace before it is allowed to congeal to the action of streams of air or steam passed up through and amongst the melted metal; at the same time he would state, that where it is preferred by others still to resort to the ordinary refinery process by re-melting, then his invention is to be applied to the melted metal as it flows from such furnace to a bed or moulds, in like manner to what he will now describe as applicable to a blast furnace. The channel or gutter employed may be of any suitable material; but he prefers it to be of cast-iron, the bottom part being made hollow, to receive steam or air, or both. This gutter is perforated with numerous holes, which he prefers to be inclined, so that the streams of air or steam may be forced through the melted metal (as it flows along the gutter) in an oblique direction, but, by preference, in the direction in which the metal flows. This, however, is not essential, as the streams of air and steam may be passed directly up through the melted metal, or the holes may be inclined in the opposite direction, so as to oppose the flow of the melted metal. When hot blast or cold blast is used, he prefers to connect the hollow bottom of the gutter with the air pipes used to supply the blast, and when steam is employed he connects the hollow bottom of the gutter with the boiler used. By these means, the air or steam introduced in the hollow bottom of the gutter below the metal will rise up and be forced through it in numerous streams; or, in place of the gutter being the means of applying streams of air below the fluid iron as it comes from a blast furnace, the moulds or beds into which the melted iron is received may be arranged with means for introducing air or steam below the melted iron, and to divide such air or steam into numerous streams, so that the iron may be purified thereby after it has come from the blast furnace and before the congelation of the liquid metal takes place. The gutter or channel may be covered over for any part of its length, and arranged in a suitable manner to admit of heat being applied to the metal therein; and such is also the case with respect to the moulds or bed, in order that heat may be continued to the fluid metal after it has left the blast furnace, and whilst the process above described of purifying the metal is going on. The iron thus purified may be allowed to cool in the moulds, or it may be run from the gutter, channel, or receiver, into a reverberatory or suitable furnace, to be highly heated therein, and may be puddled in the ordinary manner. He would remark that he is aware that it has before been proposed to use streams of steam in puddling and refinery furnaces in such manner as to come in contact with the surface of the melted metal therein, and it has also been proposed to introduce steam below melted iron when puddling the same. And he mentions these cases in order to state that he makes no claim thereto; but what he claims is, the purifying iron from a blast furnace or a refinery furnace whilst still in a melted state.

It appears that by these methods the loss of iron averages 13 per cent., the loss by the ordinary puddling process being, according to the same authority, from 17 to 25 per cent., and frequently more. Mr. Bessemer asserts that by his process masses of iron can be produced of any size or shape, and of perfectly uniform texture; and that by abridging the process so as to leave sufficient carbon in the metal, steel now worth 50*l.* or 60*l.* may be produced for 10*l.* per ton. The beauty of the theory on which the process is founded cannot be questioned; but it is, nevertheless, doubtful whether the results to be obtained have not been much exaggerated. The efficiency of Mr. Bessemer's process depends upon the iron retaining such a degree of fluidity as will allow of the air penetrating it thoroughly; and as purity and infusibility are produced in the same proportion, the air passing through the molten metal will continually encounter increased solidity, so that the application of additional heat, as Mr. Martien's patent provides for, would in many instances be absolutely necessary. Where it is not so, Mr. Martien's patent undoubtedly allows him to dispense with it.

The mere fact of introducing either air or steam into the puddling furnace is no novelty, but the object has been to regulate the heat rather than for any other purpose. In 1850, Mr. Reuben Plant (Philpotts and Plant), of Dudley, patented an invention to regulate the heat employed in the manufacture of bar or wrought-iron during the process of puddling, and claimed the use of hot or cold blasts with steam jets, and hot or cold blasts with the addition of a damper between the fire and puddling chambers, or with the ordinary damper in the draft of the chimney, to regulate the heat in the said puddling chamber; and the use of hot or cold blasts and steam jets, and steam jets by themselves to regulate the heat in the said puddling and preparatory chambers respectively, instead of the said ordinary damper. The process which had been adopted previous to Mr. Plant's invention, had been to blow the fire, and when steam was used it was merely to increase the heat. Mr. Plant took them conjointly, and if the blast be driven into the furnace, as he proposes, it appears that two very important effects are produced—the heat is increased nearly tenfold—the contrivance forming, in fact, an oxy-hydrogen blowpipe; and by blowing into and upon the surface of the iron tends considerably to carry off the injurious gases, so detrimental to the finished iron; and by this mode of applying steam to reduce the heat the iron is decarbonised, and fibre is given to it.—[Mr. Reuben Plant's invention was fully detailed, with illustrations, in the *Mining Journal* of Jan. 26 and Feb. 7, 1850.]

THE MINING AND INDUSTRIAL INTERESTS OF CORNWALL.

[FROM OUR CORRESPONDENT IN WEST CORNWALL.]

SEPT. 5.—The standard last week stood at 127*l.* 16*s.*, with a produce of 7; in the corresponding week of last month the standard was 127*l.*, with a produce of 6¾. Taking into account the difference of produce, this is a rise of 4*l.* odd on the standard, and of about 6*s.* per ton in the price of ore. This must tend to give increased buoyancy to the share market; and, indeed, business is more brisk, and transactions are more numerous, than for some time past. Wherever samplings are increasing, or improvements are made, opening up good prospects, there is no want of purchasers at advanced prices. From the increasing business in shares, it would seem that mining is on the point of springing up from its former inactivity, and benefiting from a further influx of capital.

Several mines are in an improving state, and attracting purchasers. South Frances is looking exceedingly well. At the account on Monday the profit on the two months was 433*l.*; a dividend of 8*l.* per share was declared, and the balance increased by 367*l.* The mine is likely still further to increase profits; the number and nature of the lodes impart confidence, and shares are from 355*l.* to 360*l.* St. Day United Mines are increasing returns; at the account no call was made, the mines being about meeting costs. These are a very important run of mines, and afford employment to a large number of the population of Gwennap. At a meeting, at Consols, of the adventurers of the United and St. Day United Mines, who some time ago purchased Consols, it was resolved to offer this old and extensive mine for sale by auction. In North Basset shares are about 32*l.* 10*s.*; Wheal Basset about 290*l.* In Wheal Buller eastern shaft there is some most promising gossan, &c.; and, in expectation of a course of ore, the price of shares will probably advance.

At South Tolgus meeting, on Tuesday, there appeared a profit on the two months of 429*l.*, increasing the balance in hand to 755*l.* The mine is looking well, and is likely to pay a dividend early next year. At East Tolgus, the lode continues highly productive in the 22 fm. level, east of engine shaft, and hopes are entertained that the ore will be found in the 34, when sufficiently advanced; the shares have been in considerable demand at about 75*l.* At Wheal Ellen account, the mine was about 580*l.* in debt, and a call of 12*s.* per share was made. The mine is reported to be in a promising condition, and likely to increase samplings. At Wheal Hender, an improvement is reported, by the discovery of a good tin lode. Stray Park is also stated to have improved, and shares have changed hands. West Stray Park from 8*l.* 10*s.* to 9*l.* per share. At South Wheal Ellen bi-monthly account, on Tuesday, the mine was 660*l.* in debt, and a call of 15*s.* per share was made. This debt included 315*l.* on account of the winding and crushing engine. The samplings of ore from this promising mine are fast increasing. North Frances is looking favourable in the 54 fm. level, and in other parts of the mine. Great Alfred will increase samplings; the improvement in the western ground is very encouraging to the adventurers.

From intimations which have appeared in the *Mining Journal*, many mine shareholders have been expecting to see a prospectus for the formation of a new smelting company. Of course, however, any project of the kind must render necessary many preliminary enquiries and considerations. The smelters are in no way alarmed, for they know that many such projects hitherto have come to nothing. After the great dissatisfaction caused by the conduct of the smelters within the last three months, it will be unfortunate if the miners and manufacturers again settle down in apathy, and do nothing to combat the smelters' monopoly. Should this be the end of all the talking and agitation which has taken place, the smelters will be emboldened to turn the screw tighter yet, and make more profits out of the miners than ever.

A praiseworthy example was set by the managers and adventurers of Cook's Kitchen Mine on Saturday. They treated all their underground miners, and those employed at grass, male and female, to a railway excursion to Penzance, accompanied by the agents of the mine and a band. A very agreeable holiday was spent, and good feeling promoted between employer and employed.

Capt. James Miners, of Carn Brea Mine, died on August 27, and was buried on Tuesday last, his funeral being followed by his relatives and friends, and by hundreds of working miners. He was much respected, and was a thoroughly practical miner; he had been twenty-three years agent to the adventurers in Carn Brea Mine, in which the workings are very extensive.

An agricultural report of the harvest in Cornwall states that the crop of wheat is a good average one, much superior to that of last year. During the past week the bulk of the wheat crop has been secured. The barley crop is not so good as the wheat, having ripened too quickly. The oats are reported good in all parts. A plentiful harvest will place the miners and labourers of Cornwall in a much better condition than they have been in during the past year, and will give an impulse, it is hoped, to the trading and mining interests of the county.

The Cornwall Railway Company held their half-yearly meeting at Truro, on Friday, Mr. M. Williams, M.P., in the chair. Since their establishment the company have expended 960,273*l.* in railway works, land, and other expenses; yet they are now in want of further capital to complete the line from Plymouth to Truro, the line from Truro to Falmouth being for the present abandoned, but intended to be made at some future period. From Truro to Liskeard the line is nearly ready for the rails; and from Liskeard to Plymouth the works are so far advanced as to enable the engineers to complete them within the time required for constructing the great bridge over the Tamar at Saltash. This immense work is proceeding slowly, under Mr. Brunel's directions, and no precise time is named for its completion. For the further capital required, the directors are in negociation with the Great Western, Bristol and Exeter, and South Devon Companies, who have a large interest in the Cornwall line. It is much to be regretted that this county, so important for its mineral produce, should so long be isolated from the general railway system of the kingdom.

At the West Cornwall Railway meeting, held at Penzance, on Saturday, Mr. Louis Vigurs in the chair, no dividend was declared, the profits over expenses being insufficient for that purpose. The Chairman stated that there was a steady increase of the merchandise traffic; but they could

not look for any great extension of the passenger traffic until the Cornwall line was completed, and connected with the West Cornwall, making the latter a part of the continuous system of railways.

REPORT FROM YORKSHIRE, DERBYSHIRE, AND LANCASHIRE.

[FROM OUR CORRESPONDENT IN CHESTERFIELD.]

SEPT. 5.—The general tendency of the reports from the iron-producing districts of these counties are favourable, and indicate a somewhat better prospect of an improved trade. The highly satisfactory reports of the harvest, and the probability of cheap provisions, together with the receipt of some large orders from America and the north of Europe, have led to this improvement. The general prospects of American trade have been better, and several large orders from that country, which were withheld, have now been given out, some of which are for immediate execution. The orders received from the north of Europe, during the last month, were considerably on the increase, and during the present week fresh demands have been received from that part of the globe. Plates are in better demand, and the enquiries for bars is steadily maintained. The enquiry for rails is active, and several large orders have been received this week, both for home and continental railways. The system of underselling, although now going on to some extent, has not increased. The makers of secondary qualities of iron are not so pressing for orders, and prices have been more steadily maintained. The demand for pig-iron has not improved, and the stocks which were lowered during the prevalence of hot weather, have not increased. As the period for holding the quarterly meetings is fast approaching, considerable interest is being attached to the probability of an alteration in the prices. Of course, much will depend upon the state and condition of the trade for the next few weeks. It is feared that unless there be a further improvement prices will recede.

The invention of Mr. Bessemer, for the improved manufacture of malleable iron, continues to attract much attention, and the results of experiments are anxiously awaited. The latest public experiment was made on Monday last, and it seemed to confirm the views entertained by a large number of the trade—namely, that the invention is an important step towards the success of a mode by which the puddling process might be dispensed with, but that some operation would be required to preserve the fibrous quality of the iron. A piece of spongy scrap-iron, which had fallen from the mould, was afterwards beaten into bar-iron, in a blacksmith's forge, and stated to exhibit fibre in its fracture, and otherwise to indicate a good quality of iron. Mr. Bessemer has a deal of prejudice to combat with; and, with a view to give the ironmasters in the provinces an opportunity of testing the invention, he has consented to erect one of his furnaces in Manchester for the purpose of experiments. It will probably be ready in about a fortnight, when a large number of ironmasters will attend.

The Coal Trade is somewhat better, but the demand is scarcely an average for the present season. No alteration has recently taken place in prices. The ground near the intended ironstone and colliery works at West Staveley is being laid out for buildings for workmen, and arrangements have been made for a large mineral trade so soon as the works are completed.

The proceedings of the half-yearly meeting of the South Yorkshire Railway—essentially a mineral line—confirm the remarks we have repeatedly made with reference to the coal trade of South Yorkshire. It appears that the prices for some descriptions of coal in London have ranged as low as 12s. or 14s. per ton. Notwithstanding the depression in trade, the quantity of coal sent from Yorkshire has considerably increased during the last year, being 304,650 tons as compared with 270,845. The company are now exporting coal to Grimsby by an arrangement with the Manchester, Sheffield, and Lincolnshire Railway. They had already exported 16,500 tons, and the demand was increasing. The South Yorkshire Company had subscribed 25,000*l.*, or one-fourth of the capital of the Anglo-French Steam Company, the Manchester, Sheffield, and Lincolnshire Railway Company finding another 25,000*l.*, and a body of French gentlemen 50,000*l.* more. They were exporting 1000 tons of coal per week, and they had opened a connection with one of the first French firms, which had obtained a market for them on the other side of the channel. The South Yorkshire coal field yields a better class of coals than either South Wales or Durham; and now that they had got an export market for it, an opportunity had occurred for developing the traffic which never existed before. The South Yorkshire Company have purchased a steamer of 20-horse power, which is intended to shorten the route between Sheffield and Hull.

The strike of colliers at the Oaks Colliery has terminated after 10 weeks' duration, and a number of the men have returned to work. Many of the colliers were perishing from hunger. The dispute was settled by a conference between the masters and workmen, in which it was agreed that another person should be placed over Mr. Minto in the management.

THE IRON AND COAL TRADES OF STAFFORDSHIRE.

[FROM OUR CORRESPONDENT IN WOLVERHAMPTON.]

SEPT. 5.—The demand for iron shows no satisfactory indication of improvement, and the trade at the present time is undoubtedly very slack. A little present activity has been imparted to the trade by the execution of orders for the Continent—Germany, Prussia, &c.—and for America, which must be shipped very shortly in order to reach the ports before the inland navigation is closed by the freezing of the rivers and canals; but this is only of a temporary character, and prospects for the autumn are less promising than could be wished. Whether a reduction will be effected at the preliminary meeting of the trade, to be held on the 28th of the present month, or not, it is at present impossible to say. Some contend that a reduction in this district would lead to a further reduction in other parts of the country, which would leave the South Staffordshire makers in the same position; but all admit that a fall of 1*l.* per ton would have the effect of bringing large American orders here, as it has been found that the manufacturers there cannot compete with this country when bars are 8*l.* This price prevailed during a portion of last year, and much lower rates have ruled during the last ten years, as may be seen from the following statement given in the *Birmingham Journal*, which applies to the last twelve years, giving the prices of plated bars for that period:—

July to September, 1844, 7*l.*; October to January, 1845, 6*l.*; February to June of that year, again 7*l.*; in July and August, the price was 8*l.*; in September, 9*l.*; from October to January, 1846, 10*l.*; and in the month of February of that year the prices touched 11*l.*, which was probably the highest really paid to the maker. From March to June, 1846, 10*l.*; July to September, 9*l.* 10s.; and from that period until January, 1847, again 10*l.*; then came a fall of 30s. per ton. In January, 1848, 8*l.* 10s.; February and March, 9*l.*; April, 8*l.*; May and June, 7*l.* 10s.; July, 7*l.*; and from August, 1848, until April, 1849, the average price 6*l.* 10s. only. In May of that year it rose to 8*l.*, but fell again in June to 6*l.* 10s., and in July to 6*l.*, at which the price remained until November, 1852, when there was an advance to 7*l.* Towards the close of the year the price again began to creep up, and between the middle of January and the end of March there was an advance of more than 3*l.* per ton, the highest price paid for bars at that period being 11*l.* per ton. For the next three months the price was 10*l.*, and from that period until the end of the year, 9*l.* From January, 1854, until June, 10*l.* In July the price again got up to 11*l.*, and so remained until the end of December. At the commencement of 1855, these was a fall of 1*l.*: in February the quotation was 9*l.* 10s.; in March, 9*l.*; from April till June, 8*l.*; and from July to the middle of September, 8*l.* 10s. In October, 1855, the price advanced to 9*l.*, at which it has remained nominally ever since.

The new process which Mr. Bessemer has discovered continues to excite great interest, and is the subject of constant discussion wherever gentlemen connected with the iron trade meet. A large number of our leading men attended a trial on Monday, when 7 cwts. of grey Blaenavon pig-iron was converted into malleable iron, after being in the converting furnace for about 26 minutes. A correspondent of the *Wolverhampton Chronicle* thus describes the result:—

"Undoubtedly, malleable iron was produced, just as described by Mr. Bessemer himself; and a piece of the spongy scrap spilt upon the ground, or knocked off the corner of the ingot then made, was this morning (Sept. 2), by the help of a blacksmith's fire in this town, shaped into a very satisfactory little piece of wrought-iron bar, exhibiting fibre in its fracture, and otherwise indicating good quality.

None doubted that completely malleable iron had been produced; and the general impression seemed to be favourable as regarded the ultimate success of the invention, but it was an equally general impression that practical difficulties would prevent the present puddling process being immediately superseded.

The experiment would have been much more satisfactory had an average good quality of pig-iron been employed, instead of the Blaenavon, which is a first-rate iron; and it is to be observed that Mr. Bessemer weighs the iron *after* re-melting in the cupola, so that the whole loss is not ascertained; 12½ per cent. Mr. Bessemer considers to be about the average loss in his experiment, but probably 15 to 20 per cent. would be the entire loss in conversion. Mr. Bessemer has, however, shown the way, and doubtless he will reap the reward of his success."

I have seen some specimens of the iron then made, which has been rolled and hammered, and which exhibits great toughness, and is acknowledged by all who have seen it to be of excellent quality. The practical difficulties "which would prevent the present puddling process being immediately superseded," are understood to refer to various questions connected with the manipulation of the process; the question of the different treatment of different kinds of pig-iron; the effect of the total removal of the cinder before rolling, which it is thought may prevent the iron working so easily and "kindly" (as it is termed); the best mode of building the converting furnaces, which it is apprehended must constantly require renewal, from the great heat to which they will be exposed; and generally the experience necessary to reduce the process to such well-understood rules as will prevent mishaps and losses. There, however, appears no lack of ironmasters who are ready to give it a trial, when Mr. Bessemer's terms become known. It is currently stated that he asks 10s. per ton on all iron made by his process, but this is considered here a very unduly high rate, and one which would be sure to lead to his patent being evaded, from the greatness of the temptation it would present.

At the present make of iron, Mr. Bessemer would receive at this rate some million and a half sterling a year, if his invention were universally applied. When the hot-blast was first introduced, 1s. per ton was charged for its use, and Mr. Bessemer will probably see the wisdom of fixing a much lower rate than that which report says he is asking. It is stated that a license to employ the process has been procured by the proprietress of the Dowlais Works in South Wales, the widow of the late Sir John Guest, but I cannot learn the terms on which it has been granted.

Another inquest on two of the unfortunate men who lost their lives through the explosion in Lord Ward's Colliery at Oldbury was terminated yesterday. Mr. L. Brough, our indefatigable inspector, and Mr. Wynne, of North Staffordshire, attended, and pointed out in the clearest manner that the accident was owing, in the first place, to imperfect ventilation, and in the second place, to the neglect of the precaution in the 17th special rule, which requires that the pits shall be examined every morning before the men descend with a safety-lamp. Mr. Samuel Spence, the ground bailiff, in his evidence, said that he was not responsible for the ventilation, the butty being the responsible person—a doctrine which Mr. Brough and Mr. Wynne both distinctly contradicted. Alas for colliers! if the ventilation of pits depended upon such men as a large portion of the butties in this district. In spite of the evidence of the inspectors, the jury returned a verdict of "Manslaughter" against the deceased butty. I believe it is very probable that Mr. L. Brough will proceed against the manager to enforce the penalty for improper ventilation. Although the coroner's jury has not fastened the responsibility of the death of these 11 men on any individual, the enquiry, and the pains Mr. L. Brough has taken to make the cause of the accident clear, will not be without effect on the proprietors of collieries.

STOCK, MINING, AND RAILWAY SHARES IN IRELAND.

[FROM OUR CORRESPONDENT IN DUBLIN.]

SEPT. 4.—Prices have been again lower this week, and as the monthly settlement for Stock approaches, it is, no doubt, principally owing to this circumstance the fall in price of Consols was about 10s. per cent. on the week. The share market sympathised with the fall in Consols, and prices generally have receded, while business was less active than during the previous week. The meetings of the several railway companies being now passed, the excitement has somewhat subsided, and prices relapsed. Mining shares were but little dealt in, but they, of course, participated in the general dullness, but only to the extent of 5s. per share. Wicklow Copper shares also fell slightly. The market generally is in a dull state, and a change of any importance is not anticipated for a few weeks. The following are the latest quotations:—Consols, 94½; New Three per Cents., 94¾; Hibernian Bank, 32¼: Royal Bank, 22; Grand Canal Company, 40½; Patriotic Insurance, 7⅞; Mining Company of Ireland, 14¼; Wicklow Copper Mine, 29; Belfast and Ballymena Railway, 54½; Cork and Bandon, 11; Dublin and Wicklow, 6½; Great Southern and Western, (ex div.), 57¼; Irish South-Eastern, 7½; Killarney Junction, 10½; Midland Great Western, 53½; Waterford and Kilkenny, 6½; Waterford and Limerick, 24½.

The Irish railway meetings have all of them passed off satisfactorily, but not without considerable discussion, showing that shareholders are determined no longer to depend on reports or statements of accounts—sometimes so made out as calculated only to mislead—but to sift to the bottom, and find out the true state of their property: it is thus that confidence can be inspired. I am happy in being able to state that the trust reposed in the directors of our Irish companies has not been abused by them, and in almost every case the shareholders are satisfied with the prospects now before them. The principal meeting was that of the Great Southern and Western Company, the great trunk line of Ireland. As usual the report was highly satisfactory, as was also the dividend, 6 per cent., less tax. The only blot on the face of the report is where it refers to the defalcations of their late transfer clerk, which the Chairman at the meeting estimated at fully 25,000*l.*, but even this amount is uncertain. As additional capital for extension purposes is required, it is proposed to place shares in the market while they are at a premium, and thus in some measure to compensate for the heavy loss. The other meetings were—the Belfast Junction, when 15,000*l.* were voted to take up the Dundalk and Enniskillen preference shares, so as to enable them to complete their line—a dividend of 5 per cent. was declared; the Dublin and Drogheda, when a similar amount was voted for the Enniskillen extension, and the dividend was 4½ per cent.; the Waterford and Limerick Company, when satisfactory prospects were presented, but no dividend on the original shares; the Dublin and Wicklow Company, which was the first after it assumed the proprietorship of the Kingstown line by lease—the prospects of this company are exceedingly good, and a surplus remained, but it was not thought prudent to pay a dividend; the Dundalk and Enniskillen line, when the prospects were also considered good—a dividend of 6 per cent. was declared.

MINING AND COMMERCE IN THE UNITED STATES.

BOSTON, AUG. 19.—Following the course of trade at this season of the year, the past four weeks have exhibited the usual stagnation in all departments of finance—a prominent subject of discussion, however, has been the alarming expansion of the New York city banks.

MINES.—There is an increasing disposition to buy the best class of mining shares for investment. The great facilities for visiting Lake Superior, from May to November, induce more and more personal examination of the results of the adventures in that region, and each year adds many to the list of those who appreciate the mineral resources of this country as one of the elements of its prosperity. The Post Office Department has been strangely inefficient in providing for the regular transmission of the mails, so that, at this late date, no official returns for July have been received from the mines. The price of ingot copper remains at 26 cents, four months, with no prospect of further decline.

PITTSBURGH AND BOSTON (CLIFF).—Since the payment of the August dividend, the shares have declined to 225 bid, and 235 asked. This has been caused by sympathy with the general decline of all stocks, and the fear of a further decline in copper.

MINESOTA.—This stock has fluctuated considerably during the month. The highest point, $95, was reached on June 20, and the lowest, $84, on July 15. Since the last date, it has again touched $92, at which several hundred shares were purchased for investment. The market price has recently receded to $88. The yield for July is understood to have increased 10 tons over that of June. If the average yield continues through the year as for the last nine months—say, 156 tons per month—and nothing but an extraordinary accident can prevent it, the nett earnings of 1856, at the present price of copper, will exceed $17 per share.

ROCKLAND.—The product for July will be upwards of 30 tons. The mine, in every part of it, continues to warrant the prediction that, in a comparatively short space of time, it will be equal to the Minesota. The stock is firm at $27 bid, and $28 asked. The purchases for the last 30 days have been entirely for investment.

SUPERIOR.—This mine, formerly known as Location B, was set off as a dividend several years since to the stockholders of the Minesota Company. It lies east of the Rockland territory, and carries the Minesota and Rockland veins. Work has recently been commenced upon the tract. The surface indications are of the most promising character. The general managers of the company's affairs are the same gentlemen under whose superintendence the mines above named have produced such successful results. The stock is in demand at $6.

TOLTEC CONSOLIDATED.—The report of a committee sent to the location in June last, shows that the underground work and surface expenditures have been altogether too elaborate for the character of the mine. The shareholders have already expended $260,000, and the indebtedness of the company on July 1 was nearly $36,000 over and above available assets, unless the supplies, valued at $11,000, are deducted, leaving the deficit of $14,784·13. An assessment has been levied, of $20,000, payable Aug. 18: the stock has consequently declined to $1·25 per share.

ISLE ROYALE.—The official return to the treasurer of copper sent from the mines, for eight months to July 1, was 183 tons; add amount raised in July, 20 tons, making total raised and shipped for nine months, 203 tons. Under date of July 7, the superintendent publishes the production of the mine for the six months as being a fraction less than 120 tons; add November, December, and July, 47 tons, total 167 tons. An additional shipment of about 36 tons was made in June. It does not appear during what month the extra product was raised. The stock advanced in market value a few weeks since to $19, under the expectation that the average monthly yield would be upwards of 30 tons for the remainder of the year, and that this would allow a handsome dividend of earnings. The returns for June, of about 20 tons, disappointed holders, and the sale of large quantities of the stock in July depressed the price to 15½. In the early part of this month the shares again advanced to 16⅛, but the recent return of 20 tons for July depressed the stock to 12½.

DUPEE, PERKINS, and SAYLES.

WINDING-UP OF MINING AND JOINT-STOCK COMPANIES.

THE CWMDYLE ROCK AND GREEN LAKE COPPER MINING COMPANY.—The winding-up of this company proceeds upon the petition of Mr. James Edward Delamere, and Mr. Gustavus Edward Beckers, two of the shareholders, who state that the company was formed in 1850, to work certain copper mines in Beddgelert, Carnarvonshire, under a lease from Sir R. Bulkeley for 21 years, from Oct., 1843, subject to 1-16th royalty, under the Cost-book Principle. It was arranged that the company should be formed with a capital of 30,000*l.*, in 10,000 shares of 3*l.* each. Mr. Delamere became a subscriber for 582 shares, and paid 582*l.*, and Mr. Beckers for 696 shares, and paid 696*l.* The mines were worked, but no profit was derived by the shareholders from the business, and it became evident that their working must be discontinued unless all the holders of shares would agree and subscribe their fair proportion of the amount of the monthly cost-sheets. Calls had been made to discharge the debts and liabilities, and in most instances these calls had been paid by the shareholders, but notwithstanding these payments the company is now largely indebted to numerous persons (say the petitioners) in considerable sums, and there are no available assets for the payment of more than a small part of the debts. The difficulties in which the company have been placed arose principally from the fact of its having commenced operations with a very small working capital. The committee of management was threatened with actions on account of debts due, and an action had been brought against Mr. B. L. Sowell, the present chairman of the committee, for a debt alleged to have been contracted by the company in 1853, with a verdict for 45*l.* and 60*l.* costs, and which amount had been paid. The debts and liabilities, as far as they are known, are believed to amount to 2068*l.*, and to meet that sum the assets of the company include an amount due on unpaid calls, some part of which will probably not be paid, amounting together to 851*l.*, in conjunction with the mine, plant, and machinery, which is much deteriorated in value, by wear, tear, and decay, and the office furniture. The working of the mine is carried on to a very small and limited extent, and principally to avoid forfeiture of the lease; and the petitioners believe that no profit or advantage will arise from a continuous working of it, but on the contrary great loss; and that it will be to the advantage of the shareholders that it should be dissolved and wound-up.

BOSWORTHEN MINING COMPANY.—It is rumoured that it will not be possible to carry out the order of the Court for an adjustment and taking an account as between Mr. Marrack and the petitioners, and that an order to wind-up the whole affair will have to be applied for after the recess.

PARENTAL ENDOWMENT ASSURANCE COMPANY.—The affairs of the association are to be investigated and wound-up, by order of the Master of the Rolls, on the petition of Mr. John Hornby, of 105, Regent-street. It was started in 1854, and its capital was divided into 5000 shares of 5*l.* each. The shares were transferable without the express consent of the co-partners, and the company thus came within the provisions of the Joint-Stock Companies Winding-up Act. The preliminaries required by the Registration Act having been completed, the company was provisionally registered on Dec. 14, 1853. The prospectus was issued, with the names of Dr. Birch, of Oxford-square, Hyde-park; Mr. E. Canton, Saville-row; Mr. Stirling Coyne, Wilmington-square; Mr. J. M. Jopling, Horse Guards; Mr. Frederick Marrable, Rutland-gate; and Mr. B. Watson, Nottingham-place. Messrs. Kearsey and Masterman were the solicitors, but some time after provisional registration they ceased to act, and Messrs. Brady and Son, of Staple's Inn, had since acted as solicitors. The Deed of Settlement was dated Feb. 20, 1854, and was signed by all the parties who were shareholders at that time, and by the petitioner, who executed for five shares. The company was completely registered in February, 1854, and opened its offices at 24, Leicester-square, on the premises of the Royal Panopticon. It carried on business for a short time, under the management of Mr. R. T. Jopling, who was appointed its manager and actuary, and who, the petitioner states, was chief promoter of the company, and specially active in its management, and who resided on the premises. In the latter part of 1854 its affairs became embarrassed, and many difficulties arose in obtaining contributions from the shareholders, necessary to meet the pressing liabilities, and on Dec. 1 in that year the business was assigned over and transferred to the Universal Provident Life Association, which thereupon became responsible for the liabilities arising on the policies of assurance granted by the Parental; and the petitioner says he is informed, and believes, that the Universal Provident made themselves responsible for the other liabilities of the Parental, which from that date ceased to carry on operations. A call of 1*l.* was made by the directors, but few shareholders had paid it. On May 2, 1855, judgment was obtained in the Exchequer for 60*l.*, and 10*l.* costs, in an action brought by Mr. J. King against the company, and execution was issued against the property of the company, but the sheriff made a return of *nulla bona*. On May 27, the petitioner was served by Mr. Fisher, of King-street, Cheapside, as solicitor for Mr. King, with notice to carry the execution into the Court of Common Pleas, but such execution was eventually restrained, and Mr. King's claim now remained unsatisfied, but petitioner is in danger of having execution issued against his property. Several other judgments at law have been obtained against the company, and amongst others for 207*l.* at the suit of the Royal Panopticon, and 344*l.* by Mr. Smith, of Bond-street, and there were other outstanding claims. A large number of the shareholders had not paid calls, and the directors, since the formation of the company, had paid no call whatever. Mr. Harding is the official manager to wind-up the affairs, and Messrs. Chubb and Sloane, of South-square, are his solicitors. The settlement of the list has to be completed now that creditors have been called in.

UNIVERSAL PROVIDENT LIFE ASSOCIATION.—The Master of the Rolls has appointed Mr. Henry Croysdill, of Basinghall-street, actuary, to wind-up this company, which was established in 1853, in King William-street, City, originally a friendly society, but it was subsequently incorporated as an Insurance Company. Creditors have been called in, and the liabilities are estimated at 5000*l.*, and the list has to be settled. The directors, it appears, sold their shares to get rid of the liability, but the Court has ruled that this cannot legally be done. Messrs. Terrell and Chamberlain, of Basinghall-street, are the solicitors.

LONDON AND BIRMINGHAM EXTENSION RAILWAY.—This abortive railway scheme is nearly wound-up. There have been three calls to pay off the liabilities amounting to 10,000*l.*, to which, from being originally 30,000*l.*, they were reduced by Mr. Croysdill, the official manager. The first call was 1*l.* 13s. 6d., allowing for payment of the deposit of 1*l.* 7s. 6d. The second was 1*l.*, and the third 1*l.* 8s. There were 500 contributories on the list, of which number about 200 responded to the respective calls.

ROYAL PANOPTICON.—It is rumoured, but with what degree of correctness we cannot say, that this undertaking will be wound-up in Chancery.

NEW MINING COMPANIES UNDER THE LIMITED LIABILITY ACT.

The following new mining companies have been incorporated and registered at the Joint-Stock Registration Office:—

THE BRENKBURNE IRON AND COAL COMPANY.—To work the Brenkburne Mines, in Northumberland, consisting of 2150 acres. Amongst the names subscribing the deed of registration are—N. A. Staples, Hendon, for 450 shares; J. Temple, Army and Navy Club, 400 shares; Major Byam, 300 shares; J. H. Holdsworth, 525 shares; C. T. Christian, St. Martin's-place, 200. The total number of shares taken to the date of registration was 2135. Offices, Trafalgar-square.

MOUNT GABRIEL MINERAL COMPANY.—To work mines under the lands of Letter and Knocklaclovane, Barony of West Carbery, Cork. Proposed capital, 10,000*l.*, in 1000 shares of 10*l.* each. The total number of shares taken to date of registration, 530. Office, Savage-gardens, Tower-hill.

QUARTZ REDUCTION COMPANY.—To purchase the property of the Agua Fria Gold Mining Company; to work in California, on custom work, in the reduction of quartz rock, and to work the concessions of the Agua Fria. Capital, 50,000*l.*, in 50,000 shares of 1*l.* Office, 3, Old Broad-street. Secretary, W. J. Vian. Shares subscribed to date of registration between 9000 and 10,000.

GARNETT AND MOSELEY GOLD MINING COMPANY OF AMERICA.—Capital, 50,000*l.*, in 50,000 shares of 1*l.* each. Shares taken to date of registration 37,245. Secretary, W. Boyle. At a meeting held June 18 (Mr. R. D. Tennant in the chair), it was resolved to place the company under the

Limited Liability Act. Mr. C. Bourdillon, Throgmorton-street, and Mr. J. F. Sutton, Basinghall-street, are two of the registered directors.

HOUSEHOLDERS' COAL COMPANY.—To purchase and work coal-fields and collieries in the Forest of Dean. Capital, 50,000*l.*, in 50,000 shares of 1*l.* Shares taken to date of registration, 70.

THE NEW JOINT-STOCK ACT, AND THE COST-BOOK SYSTEM.

Two meetings of the shareholders in the CORD MAWR POOL and the DALRHIW MINING COMPANIES were held at the offices, Cannon-street, on Thursday, called especially to determine upon the necessity or the propriety of being registered and incorporated under the limited liability provisions of the new Joint-Stock Act, 19 and 20 Vict., which comes into operation on Nov. 3.

Twenty shareholders were present, and unusual interest was excited, in consequence of the report of differences of opinion prevailing in legal quarters as to the strict interpretation of certain clauses in the Act, especially in reference to its alleged application to all companies not exempted by special clauses.

It is well known in the mining world that upwards of 100 companies, working on mineral ground beyond the confines of Devonshire and Cornwall, carry on their affairs professedly under the Cost-book System, which has been especially recognised by various legal decisions as applicable to companies without, as well as within, the jurisdiction of the Stannaries Courts, by their being exempted in the Joint-Stock Act of 1844, not merely in Devon and Cornwall, but generally.

The notices of the meeting having been read by the purser, a SOLICITOR (also a shareholder) in both companies, said he saw nothing in the Act to render it imperative on these companies to be enrolled under its provisions. He pointed out, with considerable legal acumen, various defects and discrepancies in the wording of the Act, which created difficulties as to their strict interpretation. It was his opinion that it made no provision for cases like the present, that the shareholders were co-partners, and each entitled to a certain interest in the mine; that the 5th, 7th, 10th, and 15th clauses would go to show that the Act only applied to schemes entirely new, but that if it did apply, no pecuniary penalties were imposed for non-compliance with its provisions.—Another SOLICITOR expressed similar views. He did not consider the registration under such Act to be imperative, but thought the cost-book companies might still stand as hitherto.

The PURSER (Mr. Soper) said he had called the meeting, as it did appear to him that it was the intention of the Act to extinguish all companies, consisting of more than 20 shareholders, not particularly exempted by the terms of the Act, and to require their organisation under its provisions; but whether such condition *was* or *was not* "imperative," he considered it his duty to have their advice and instruction on the subject. Athough as purser under the Cost-book System, he was a legally responsible and recognised representative of the companies, and the new Act transfers such authority and responsibility to directors, he, nevertheless, thought he was bound to represent the undoubted advantages which would be secured to companies by their being organised under that Act. The *limited* responsibility, and the systematic rules and practices therein enforced, would be likely to extend *confidence*, and thereby open a wider field for the disposal of the shares, and for the general operations of the companies. He had felt it his duty to seek advice, and he had been favoured with the opinions of several friends of legal standing and experience in mining affairs, which he should submit to the meeting; but, first, he would observe that the Articles of Association in the Act would require some modification. For instance, the condition that no transfer of shares should be effected without the previous consent of the directors in writing, would greatly embarrass the business transactions in shares, and the regulation that extraordinary general meetings of the company might be called by any *two* shareholders would lead to much trouble, and, perhaps, useless annoyance. The books being required to be kept by double entry, would also increase costs. But with respect to the legal interpretation of the Act, he had received the following letters from barristers, whose judgments were entitled to consideration:—

Temple, Aug. 11.—In reply to your enquiry, I beg to state that Section 4 of the new Joint Stock Companies Act (19 and 20 Victoria, chap. 47) renders it imperative upon all companies, having more than 20 partners, to be incorporated under the Act, with the exception of those which are authorised to carry on business by some private Act of Parliament, or by Royal Charter, or Letters Patent, or are engaged in working mines within and subject to the jurisdiction of the Stannaries. Of course, all cost-book companies not subject to that jurisdiction must come under the previous Act. The incorporation must take place before the 3d of November next.—W. C. G.

Lincoln's Inn-fields, Sept. 4.—On referring to the Act 19 and 20 Victoria, sec. 4, although very imperfetly worded, I am of opinion that this clause makes it imperative in all mining companies not under an Act or Charter, and not within the counties of Devon and Cornwall, where the Stannaries have jurisdiction, to be registered on or before Nov. 3 next. Looking to Sec. 98, it is clear that the powers of the Vice-Warden of the Stannaries are extended for the purpose of mines under the jurisdiction of their Courts, and the naming of those companies as an exception proves the rule as to other companies. Clause 110 would seem to imply an option when companies are legally constituted, but I do not think the Cost-book System out of the Stannaries such a legal constitution as to admit of this exception. In my own case I shall propose, therefore, adopting it; and I think, although a little troublesome, those companies found to adopt it will perhaps stand better before the public than even those under the Stannary Courts.—G. M.

The CHAIRMAN of the Dalrhiw meeting, also a barrister, and a shareholder in both companies, expressed his concurrence in these views and interpretations of the new Act. He thought it would be advantageous to the interests of the companies to be organised under that Act, whether it was, or was not, absolutely imperative. Other shareholders also thought it would be desirable to register; but, after much discussion, it was finally resolved by both meetings, that for the present no steps should be taken to register the company under the new Act, but that their affairs should be conducted as hitherto, under the rules and regulations of the Cost-book System.

The PURSER said he should write to the Board of Trade to know whether the Act operates to the extinction of the cost-book companies, with shareholders exceeding 20 in number, whose works are carried on out of Devonshire and Cornwall, so that they are absolutely required to be constituted and incorporated under the new Act.

RAILWAY TRAFFIC.—The Traffic Returns of Railways in the United Kingdom, for the week ending Aug. 30, amounted to 478,999*l.*, and for the corresponding week of 1855 to 461,732*l.*, showing an increase of 17,267*l.* The gross receipts of the eight railways having their termini in the metropolis amounted, for the week ending as above, to 209,737*l.*, and for the corresponding week of last year to 202,100*l.*, showing an increase of 7637*l.*

The increase on the Eastern Counties Railway amounted to 397*l.*; on the Great Northern to 368*l.*; on the Great Western to 2246*l.*; on the London and North-Western to 2958*l.*; on the London and Blackwall to 94*l.*; on the London, Brighton, and South Coast to 142*l.*; on the London and South-Western to 1651*l.*: total, 7856*l.* But from this must be deducted 219*l.*, the decrease on the South-Eastern, leaving the increase, as above, 7637*l.*

The receipts on the other lines in the United Kingdom amounted to 269,262*l.*, and for the corresponding period of 1855 to 259,632*l.*, showing an increase of 9630*l.* in the receipts of those lines, which, added to the increase on the metropolitan lines, makes the total increase 17,267*l.*, as compared with the corresponding week of 1855.

RAILWAY CALLS.—The amount falling due in Sept. is 1,181,500*l.*,—making the total for the nine months, 10,455,765*l.*

CANNOCK MINERAL RAILWAY.—The directors' report, presented at the half-yearly meeting, stated that the negociations for the lease of the line to Mr. J. R. M'Clean, the lessee of the South Staffordshire line, had been broken off, as the directors were unable, on the guarantee of an individual, to raise the requisite funds to complete the undertaking in the manner contemplated. The directors renewed their negociations with the North Staffordshire board, which had finally led to an arrangement not dependent upon parliamentary sanction. By it the proprietors are to receive a minimum dividend of 4¼ per cent., with half profits in perpetuity upon their capital, which would be sufficient to provide for all past expenses and existing liabilities, and complete the railway. The mineral traffic of the authorised line would be so large as to make it probable that the moiety of the surplus profits would considerable increase the dividend; and when the extensions to Colwich and Wolverhampton are completed, and the Cannock Mineral Railway has become a portion of the through line for North Staffordshire traffic passing southwards, this surplus would not only very largely augment the dividend of the Cannock Company, but be a consideration of some moment to the North Staffordshire Railway Company. The sufficiency of the available capital for the completion of the railway in the manner proposed had been reduced to a certainty by a contract which had been recently concluded with Mr. Stephenson. The sum to be paid Mr. Stephenson included the cost of the unbought land and every contingency, and would leave a liberal margin for office and other expenses during the construction. The Chairman remarked that the Cannock line formed a connecting link between the Potteries in North Staffordshire and the mineral districts of South Staffordshire, commencing at Wolverhampton, which largely required those productions with which North Staffordshire abounded. The necessary power was given the directors to carry out the arrangement with the North Staffordshire Company, and the meeting separated.

At the Railway Passengers' Assurance Company meeting, on Wednesday, a considerable increase in the amount received for premiums was announced. A disposable sum of 4446*l.* was shown, from which the directors recommended the payment of interest on the paid-up capital at the rate of 4 per cent. per annum, reserving the balance to meet the customary charges for Government duty and commission, and the risk on current polices. A loss of 2000*l.* has been incurred, however, on policies since the commencement of the current half-year.

The Geelong and Melbourne Railway Company are advertising for tenders for the freight of materials from Liverpool to Geelong.

RAILWAY SLEEPERS.—Some controversy has recently taken place between Mr. Bethell and Dr. Boucherie, who has a patent for preserving sleepers. The plan proposed by Dr. Boucherie is driving out the sap with sulphate of copper, which is much cheaper than creosoting the sleepers according to Mr. Bethell's patent. It is true that considerable advantage is derived from Dr. Boucherie's operation being effected as soon as possible after the timber is felled, but in the forests in this country or Norway, the total cost of the apparatus erected on the spot would not exceed 50*l.*, and the expense of the article used is merely nominal. At the late Paris Exposition the distinguished honour of one of the large gold medals (of which only four were conferred) was awarded to Dr. Boucherie for his discovery, and practical application of this invention—which, we may add, is adopted by the Permanent Way Company.

RAILWAY SPRINGS.—A volute spring for railroad cars has been recently patented by Mr. Ray, of New York, intended to supersede the single elliptic spring used in England, and the double elliptic frequently used in this country. It is received with much favour, and on trial has given entire satisfaction. It is made of a stout steel ribbon, coiled up into as compact a form as a rubber spring, and possessing the frictional qualities desired in the best degree. The pressure comes upon the centre of the coil, and tends to push it through—an action which not only brings into play to a proper degree all the elasticity of the metal, which, having its particles compressed, or "upset," on the inner side of each coil, in the act of manufacturing the spring, would be soon broken by any force tending to straighten the same. A form of volute spring has been used for some time in England, but the American form is understood to be far superior—in the form of the ribbon, which is swelled in the middle, instead of flat, before winding up, and in the provision for equalising its action, by allowing it a partial support under its base as the load is increased, so that its action is pretty nearly the same under all loads.—Corres. of *Birmingham Journal.*

The *Insurance Gazette* for September, contains an explanation of the reason of Mr. Baylis's withdrawal from the Unity Association, and several interesting reports of insurance companies.

WEEKLY LIST OF NEW PATENTS.

GRANTS OF PROVISIONAL PROTECTION FOR SIX MONTHS.—H. A. JOWETT, Sawley, Derby: Improvements in rails and railway chairs, and in the construction of railways.—S. LILLEY, Birmingham: Improvements in the manufacture of ships' iron work, a part of which improvements are applicable to the manufacture of other articles in iron.—L. A. JOYEUX, Marseilles: Motive power.—W. E. NEWTON, Chancery-lane: Forging or working iron and other metals.—R. A. BROOMAN, Fleet-street: Stopping or retarding railway carriages and trains, and in preventing carriages from running off the rails.—R. JONSON, Wordsley: Apparatus for pouring iron or other metal into moulds.—J. H. JOHNSON, Lincoln's Inn-fields: Steam-engines; also for casting metals.—W. GOSSAGE, Widnes: Obtaining metal and sulphur from certain ores and other compounds of metals.—G. J. FARMER, Birmingham: Hardening iron and steel.—E. SIMPSON, Preston: Improved safety cage for mines and pits, or apparatus to be fitted to cages to prevent accidents from the falling thereof.—S. ROBERTS, Hull: Regulating the supply of steam to engines working screw or submerged propellers, and regulating or relieving the pressure of steam on slide valves.

MANUFACTURE OF CAST-STEEL.—Mr. Gentle Brown, of Swinton, Yorkshire, has patented an invention, which consists in the production of cast-steel, of good quality, by a much cheaper and more simple process than that now in practice, the operation of converting the iron in the ordinary converting furnace being rendered unnecessary. In carrying out this improved manufacture, he puts into a common melting pot charcoal bar iron, clipped in pieces of about 1½ in. long, and adds thereto good charcoal pig-iron, in the proportion of one part, more or less, by weight of pig-iron, to three parts, more or less, of the clipped bar-iron. This combination of metals is melted in the usual manner, and then run into ingot moulds. By this process cast-steel is obtained, suitable for any purpose to which cast-steel made on the old plan can be applied; the various qualities of steel required being obtained by slightly varying the proportions of bar and pig-iron. Taking 40 lbs. weight as the standard of an ingot, the inventor would put from 7 lbs. to 12 lbs. of pig metal, and the remainder bar-iron; these proportions would produce a cast-steel suitable for most purposes. Thus, for cast-steel to be manufactured into edge tools, he prefers to combine 10 lbs. of pig metal with 30 lbs. of bar-iron. For table knives, he adds 4 lbs. of pig metal to 32 lbs. of bar-iron; and for hard steel 12 lbs. of pig metal to 28 lbs. of bar-iron. But as almost all irons differ in hardness and quality, these proportions are not available, but must to a slight degree be modified according to the judgment of the smelter.

MANUFACTURE OF IRON.—Mr. J. Onions, Wellington-place, Southwark, has secured a patent, by which he proposes to apply at the tuyere, or other suitable part or parts of the blast or other furnace, the smoke, heated air, and other inflammable gases produced from fires of any kind whatever, one or more, or all of them, so that they shall be consumed in passing through the fused mass of ore or iron in said furnace; also, to prepare fuel of any combustible kind whatever, so as to apply it at a high temperature in the shape of smoke with heated air and other inflammable gases, or in finely pulverised particles, at the tuyere, or other suitable part or parts of the blast or other furnace, so as to come into immediate contact with the ores or iron in a state of fusion in the said furnace. The inventor proposes to effect this by forcing through pipes, tubes, or other covered channels, by means of a forcing or other pump, or by a piston and cylinder, or by a fan or wheel, or any other suitable means (none of which is claimed as part of this invention) the said smoke, heated air, and other inflammable gases, or finely pulverised particles of fuel, so that it or them, or each of them, the said smoke, heated air, inflammable gases, or finely pulverised particles of fuel, shall be injected with a proper force into the said furnace, so as to come in contact with the fused ore or iron, and be perfectly consumed.

PATENT BEDPLATE IRON SLEEPER.—Messrs. Wright and Co. have patented an iron sleeper for railways, which they state will effect a considerable saving in the maintenance of the permanent way. The cost of an ordinary wooden sleeper railway, exclusive of the rails, is about 1000*l.* per mile single line, and which is in seven years valueless. The bedplate sleeper costs 1720*l.* per mile, and is considered at least 10 times more durable. Messrs. Wright say that derangement from any kind of strain or concussion is impossible, and, from their much greater simplicity, are readily applied to the rails of ordinary railways.

OXIDE OF ZINC.—Mr. George Darlington, of Minera, Denbighshire, has patented an invention for producing oxide of zinc from its ores, which consists in taking the ores of zinc, either blende (sulphide of zinc), calamine (carbonate of zinc), or any of the other varieties of zinc ores whatever, and introducing them either into a blast or reverberatory furnace. The ores are to be mixed as it may be found necessary with any or all of the following substances, lime, limestone, tap-cinder, or any natural or artificial product yielding silicate of iron, silica, or any siliceous matter, oxide of iron, or iron and coke, or any other suitable carbonaceous matter. The ores and a suitable admixture made of any or of all of the above-named substances being placed into a reverberatory furnace, or mixed with the fuel of the blast-furnace, are to be exposed to a sufficient degree of heat to create the necessary chemical re-actions to ensure the production of oxide of zinc. The furnace in which such oxide of zinc is to be produced, is to be so constructed that it shall allow the oxide of zinc to be passed into any apparatus, whereby the oxide of zinc to which this invention relates is to be converted into metallic zinc.

RAILWAYS.—Messrs. J. Beech and E. Jeffreys, of Shrewsbury, have invented some improvements in the means of supporting rails of railways, which relate to an improved mode of constructing the chairs and sleepers of railways, and consists in constructing these articles of a cruciform, or star shape, so as to obtain a considerable amount of bearing surface for the sleepers, and which surface is also so arranged that it may be more conveniently and effectually packed than other sleepers of large bearing surface. In carrying out the invention, they prefer to form the chair and sleeper of one piece, and make this combined article of cast-iron. This plan is considered most economical and convenient, and the inventors propose to adopt it in constructing a new permanent way, as not only the most effectual and secure mode, but will in the long run be found the cheapest; but as many cases may arise in which it may be desirable to adapt or apply the improvements to lines of railway in which sleepers of the ordinary kind are already in use, they also propose to construct the chairs alone of a cruciform shape, and fasten the same by pins, bolts, or in any other convenient manner, on to the ordinary sleepers; and sometimes to adapt these cruciform chairs to sleepers made of a cruciform shape, on which such chairs may be secured in any convenient manner. In some cases it may be found desirable to renew the sleepers, which may have been worn out or destroyed by use and time, and yet retain the old form of chair; in which event it is proposed to employ cruciform sleepers, made either of cast-iron or wood, upon which the ordinary cast-iron chairs may be secured.

GOVERNOR FOR STEAM AND OTHER ENGINES.—Mr. Wm. J. Simons, of Royston, Herts, has invented an improved governor for steam and other engines requiring governors, which consists in the employment of springs or thin blades of metal or other suitable material instead of levers to carry weights. One form of governor constructed consists of two springs or blades of steel, each bent into the shape of a semicircle, and united at top to a boss affixed to a spindle; the other ends are joined at bottom to a collar, free to slide up and down the spindle. At a point about equidistant from each end of each blade a heavy ball or weight is affixed.

ELECTRIC TELEGRAPHS.—Mr. S. Stratham, Islington, has patented some improvements in electric telegraph conductors: they consist in forming a metal conductor, which will extend or stretch not only in the manner and to the extent of an ordinary wire or strand, but whose greater extension is due to the manner in which it is constructed. The improved conductor is formed of a hollow strand or cord of metal wires, laid spirally by any suitable machine, or of wires formed into a hollow tube by a braiding or other machine, and in either case with or without a core of gutta percha, caoutchouc, or other elastic material. The inventor employs copper, iron, or any other suitable wires, and forms his hollow conductor of a diameter proportionate to the extent to which it may be required to be stretched, and lays the wires more or less loosely, according to circumstances. One mode in which the hollow conductors are made is by laying a number of wires spirally round a mandril, which may be slightly tapered if required, and by which the hollow cord is drawn off by any suitable means. The size of the mandril, the size and number of the wires, and the length of lay, regulate the amount of extension which the conductor, when made, will admit of. Or, instead of a tubular conductor, a plaited or braided band is employed, made up loosely of metal wires and threads of india rubber, gutta percha, or their compounds.

CONVERTING RECIPROCATING INTO ROTARY MOTION.—Mr. T. Hitt, of Tavistock-street, Westminster, has patented an invention, which consists in connecting to a shaft, supported in suitable bearings, two segmental plates; in communicating to and fro motion to these plates, in fixing pauls on the inside of each plate, in a reverse direction, and in causing the pauls of one segmental plate on the stroke in one direction, and the pauls of the other segmental plate on the stroke in the contrary direction, to gear into and drive a ratchet wheel placed between the two segmental plates. This ratchet wheel has thus a rotary motion communicated to it. It is toothed all round its periphery, and through a train of wheels may be made to communicate rotary motion for such purposes as may be desired.

HYDRAULIC PROPULSION ON RAILWAYS.—In the *Mining Journal* of Oct. 20, 1855, we referred to the invention of M. Jean Panet, of Echenoz-la-Meline, Haute Saône, for a system of hydraulic propulsion for railways. A working model of the contrivance was shown in the Paris Exhibition of 1855, and the opinion of the commissioners with regard to the invention may be judged from the fact that, although it was beyond the date allowed for the admission of new objects for exhibition, they expressed themselves satisfied that the importance of the invention was such as to justify their infringing the rules, and the machinery gallery being quite full, they gave it a place in the department of agricultural products. To render the invention better understood, we may suppose a tube of obtuse angular form, so placed that the oblique arm shall communicate with the source of water, and thus give a fall of some feet into the horizontal arm, the extremity of which is closed; we have then the reservoir tube, or *alimentateur*, the water in which remains stationary until it is brought into use for the purposes of the invention. At a given point on the horizontal arm an opening is made, and a horizontal cylinder connected therewith; in this cylinder is placed a piston, by which the motion is given. The leading wagon of the train opens the cylinder by means of a valve and lever, which, being acted upon, throws the water in the required direction. An objection often raised to the system is that the uniform pressure cannot be maintained throughout; but it appears that in practice the diminution of force is almost insensible for 14 or 15 miles, and the difficulty is altogether overcome by the use of small reservoirs at intervals, which supply water to the reservoir tube only in proportion as the force is diminished. The use of these smaller reservoirs has advantages beyond the mere maintaining of uniform pressure, as they also admit of a smaller reservoir tube being employed than would otherwise be required, and prevent a shock at each stroke of the piston. Although there are, of course, localities where it would not be practicable to employ the system, there is no doubt that in the majority of instances it might be advantageously employed; and in mountainous districts it cannot fail to be especially applicable.

GOLD WASHER AND AMALGAMATOR.—Mr. W. S. Pierce, of North Attleborough (U. S.), in a new patent, takes advantage of the well-known fact that mercury, when heated to a temperature of 212°, will absorb five times more gold than at 60°. The apparatus consists of a large box, in which a furnace for producing the heat is placed. The top of the box is bowled, and covered with an inclined plane or bed, over which the crushed quartz, or gold-bearing dust, mixed with water, is caused to flow. Ledges or pockets containing mercury are placed across the bed, so as to intercept the gold. The fire below heats the mercury, and the precious metal is thus absorbed. At the lower end of the inclined bed is a fine screen, through which the finer particles of gold that may have escaped the mercury fall. They are received on a sponge, which duly retains them.—*Scientific American.*

The Montour Mills, probably the largest works in America, turns out now 100 tons of T-rails daily, made generally of two-thirds puddled and one-third reheated iron. Nine engines, with an aggregate power of 550-horses, operate the mill and furnaces; of the latter there are 72 for puddling, and 11 for re-heating: 1000 hands are employed in the mines and works.

MINING STATISTICS OF THE UNITED KINGDOM.—No. VI.

BY ROBERT HUNT, ESQ., F.R.S.

CHINA CLAY.

CORNWALL.—The principal portion of the china clay of Cornwall is shipped from the ports near St. Austell. In 1855, there were shipped from Par, 12,270 tons;* from Charlestown, 29,500; Pentewan, 18,000; Truro, 178; Padstow, 40; from other ports, 200 = 60,188 tons.

DEVONSHIRE.—Lee Moor Clay-Works, 900 tons; Dartmoor, 200 tons.

CHINA STONE.

Shipped from Par, 5341 tons;† ditto from Charlestown and Pentewan, 14,120 = 19,961 tons.

The value of clay at the works varies, according to quality, from 10s. to 24s. the ton; and of china stone, the average price is 18s. the ton.

The value of the china clay of Cornwall at works.....	£51,159	16	0
" " " Devonshire "	935	0	0
" china stone of Cornwall "	17,964	18	0

There are two special localities from which the china clays are prepared, and two descriptions obtained. The best is got in the parishes of St. Dennis and St. Stephens, near St. Austell; and the second quality in the parish of St. Austell, and two or three other districts.

The first quality is used for porcelain, and the second for whitening and filling the pores of inferior calicoes and paper.

The china stone is entirely used in the potteries. There was an agreement existing amongst the producers to send off annually 12,000 tons; but when the demand is brisk, that has been extended to 15,000 tons, and sometimes, as last year, exceeded.

The potters' raw material, consisting of clay, flint, &c., imported by railway and canal into the Staffordshire Potteries, was 80,000 tons.

At the Lee Moor Clay-Works, in Devonshire, the common clay, mica, and sand, are ground together, and made into fire-bricks, which are used in the iron-furnaces and lead-works. They are also manufacturing it as artificial stone, for external house decoration.

PIPE CLAY.

Of pipe clay, from Kingsteignton, Devonshire, &c., there appears to have been exported 20,000 tons.

BRICK CLAY.

The quantity of bricks made per annum in this kingdom amounts to about 1,800,000,000; of this quantity, Manchester alone makes about 130,000,000 per annum. What are termed the London makers produce about the same quantity; but bricks are sent to the metropolis from a circuit of 100 miles; it is, therefore, impossible to give exactly the consumption. Taking bricks at the low average of 3 tons per 1000, the annual make exceeds in weight 5,400,000 tons, and the capital employed must be upwards of 2,000,000*l.* sterling. The above statement is given on the authority of Mr. Humphrey Chamberlain, who made a communication on this subject to the Society of Arts. It is impossible at present to arrive at any conclusion as to the quantities of clay which, in the coal measure districts, is made into draining pipe, tiles, &c.

IMPROVEMENTS IN IRON SHIP-BUILDING.—We have inspected a model of an improved description of girder for use in the construction of iron ships, invented by Mr. J. Clare, jun., of Liverpool, by which the maximum strength with the minimum weight is obtained, thus securing the largest amount of mechanical efficiency, and ensuring the greatest security to life and property. The number of joints is so much smaller that it can scarcely be compared with the present system; indeed, they are reduced more than half. The *Great Eastern*, now building as a 10,000 ton vessel, has an external shipbuilder's measurement of 22,000 tons, and the weight of iron used in its construction is enormous. We understand that, by Mr. Clare's system, the thickness of the girders between the internal and external series of plates would be reduced to one-fourth of those in the *Great Eastern*—a considerably larger tonnage being, consequently, gained without increasing the external measurement. A comparison of the two plans affords ample proof that in the construction of the *Great Eastern* the strength might have been kept equal or even increased, the weight of iron employed reduced, and some thousands of tons more internal capacity gained. We must do Mr. Clare the justice to say that his invention, from the model and plan we have seen, appears the climax of mechanical efficiency in the art of shipbuilding.

NEW MODE OF MANUFACTURING IRON AND STEEL.—The new process of manufacturing iron and steel, recently patented by a Mr. Bessemer, was tried at the Dowlais Works last week. By this process, the crude iron runs from the blast furnaces along a gutter into a vessel somewhat like an ordinary cupola furnace, when the cold blast is turned on. By this means, contradictory as it may appear, a heat inconceivably intense is generated, caused by the oxygen of the atmosphere combining with the carbon contained in the iron. There is a rapid boiling up of the metal, which is tossed violently about and dashed from side to side, throwing off the silica and other earthy bases which are combined with the crude iron. In half-an-hour malleable iron or steel, fit for working in the forge, is produced, wholly dispensing with the intermediate processes of making iron into pigs, refining, puddling, and squeezing, with their attendant labour and cost of fuel. It is asserted that by this new mode a much better quality of iron can be produced, and at a cost of 2*l.* a ton cheaper, than by the ordinary process of the last 70 years. At Dowlais the blast-pipes of by some means became clogged, so that the full amount of cold air could not be brought in contact with the liquid metal; nevertheless, the experiment was considered eminently successful. Iron of a tolerable quality was produced, capable of being worked by smiths into the various articles that may be required. This new process of manufacturing malleable iron will no doubt be speedily brought into general use, and produce a complete revolution at the various works.—*Merthyr Guardian.*

THE IRON TRADE.—The North Yorkshire and Cleveland Railway, now in course of formation, is expected to be opened from Pickton (on the North-Eastern Railway) to Stokesley during the present month, and forward to a further point in a few months. On the opening of this line in its entire route there will be the most important and enormous beds of ironstone available ever yet known, and the district must gradually become the great seat of the iron manufactures. The beds are in the hill sides of from 5 to 12 feet thick, containing from 30 to 40 per cent. of iron, costing merely 5d. per ton of 21 cwts. for the royalty, and the ore worked for about 1s. 6d. to 2s. per ton; thus ironstone for 1 ton of iron costs about 7s. 6d., and coke and limestone obtained at reasonable rates. It is computed that pig-iron can be made in Cleveland at from 25s. to 30s. per ton lower than in Staffordshire.—*Sunderland Herald.*

BRITISH STEAM FISHERIES COMPANY.—The London and West of Ireland Fishing Company has not long remained without a competitor, a corresponding undertaking, and one which offers at least equal advantages, having been brought forward for fishing in every part of the United Kingdom. By the employment of steam-power, it is anticipated that fishing banks, hitherto untouched, may be made available for a vastly-increased and more regular supply of fish. It appears that, as a commercial enterprise, the company presents undoubted advantages, and will give constant employment to a large number of seamen and boys, in addition to those already engaged in the trade. The promoters calculate that a return will be secured of from 20 to 25 per cent. on the expended capital after payment of every expense.

HEATING COLD WATER BY FRICTION.—Attention has been attracted to a machine exhibited at the French Exhibition, by which water was to be heated, and steam of any power raised, by the heat generated by friction—the friction being produced by forces otherwise unavailable. It threatened to be a second caloric engine, but the committee to which the French Academy of Sciences referred it (Morin, reporter) have shown that for raising steam it is by far the most costly means yet proposed for getting power; and that cooking by it is impossible, since, in the machine arranged for that purpose, the force of eight men exerted for 4½ hours was barely able to raise 5 litres (1⅜ gallons) from 42° to 149° Fahr. On another trial, eight men in eight hours raised 2⅜ gallons water from 39° to 156° Fahr. The highest of these temperatures is insufficient for cooking purposes. Are there not yet some other similar inventions for the Academy?—*Journal of the Franklin Institute.*

PRACTICAL TREATISE ON WROUGHT-IRON BRIDGES AND GIRDERS.—The First Part of a work, by Mr. W. Humber, Assoc. Inst. C E., under the above title, has just been issued by Messrs. Spon, of Bucklersbury, and if the future parts be anything like the present, as regards the excellent manner in which the illustrations are executed, and the explanations be equal to them, it will be almost invaluable. The letter-press contained in the number comprises only a part of the introduction, but even that is ample to prove that the author is master of the subject upon which he proposes to treat.

BRITISH PORTABLE GAS APPARATUS COMPANY (LIMITED).—By means of this apparatus, the long-wished-for desideratum is attained of enabling noblemen, gentlemen, manufacturers, and others, to PRODUCE THEIR OWN GAS, at a small cost.

The raw material from which the gas is made will be supplied by the company.

The apparatus can be moved with facility; a machine capable of supplying 10 burners for eight hours per night, for a week, will only occupy a very limited space.

The preparation of the gas is very simple; and the apparatus—for which a Silver Medal has been awarded by the American Institution—has been practically successful in the United States, and can be managed by any ordinary domestic with safety.

Gas manufactured by the use of the company's apparatus and raw material is very brilliant, of great purity, emits nothing in the slightest degree deleterious to health, furniture, metal or paint, and is applicable for any of the uses to which gas is now applied.

The sphere of the company's operations will be extensive, this mode of illumination being admirably adapted for those localities where gas has not been already introduced—such as isolated country mansions, houses, manufactories, and railway stations; for hospitals, asylums, and other establishments, where it is of importance to secure an economical and easily manageable light, containing neither carbonic acid nor any compound of sulphur or ammonia.

As confirmative of the anticipated satisfactory nature of the business, it may be stated that one gallon of the raw material furnished by the company has been ascertained to yield about 79 cubic feet of gas, and also leave a considerable quantity of refuse, which the company will re-purchase at a liberate price.

This gas, therefore, possesses the following advantages:—It is economical, and from its superior brilliancy a much smaller quantity is required than of ordinary gas to produce a given amount of light, consequently less heat is caused by its use; no compound of sulphur or ammonia is evolved during its combustion; porcelain and white paper are not discoloured when held at a moderate distance above the flame, and no perceptible smell arises from it while burning.

The prospectus, with names of the directors, and report from Messrs. Brandram Brothers and Co.'s works at Rotherhithe, with other testimonials and pamphlet, may be had at the office, and at the brokers.

Forms of application for shares may be had at the office, No. 41, Moorgate-street, London; or of Messrs. COPE and SCOTT, 7, Lothbury, London; and at Messrs. GREENLAND BROTHERS, Leeds.

In giving orders, the number of jets required should be specified; also the time they are to be kept burning.

METROPOLITAN SCHOOL OF SCIENCE,
APPLIED TO MINING AND THE ARTS.

DIRECTOR—Sir RODERICK IMPEY MURCHISON, D.C.L., M.A., F.R.S., &c.

During the Session 1856-57, which will COMMENCE on the 1st of October, the following COURSES OF LECTURES and PRACTICAL DEMONSTRATIONS will be given:—

1. CHEMISTRY ..... By A. W. HOFMANN, LL.D., F.R.S., &c.
2. METALLURGY ..... By JOHN PERCY, M.D., F.R.S.
3. NATURAL HISTORY ..... By T. H. HUXLEY, F.R.S.
4. MINERALOGY .....
5. MINING ..... } By WARINGTON W. SMYTH, M.A.
6. GEOLOGY ..... By A. C. RAMSAY, F.R.S.
7. APPLIED MECHANICS ... By ROBERT WILLIS, M.A., F.R.S.
8. PHYSICS ..... By G. G. STOKES, M.A., F.R.S.

INSTRUCTION IN MECHANICAL DRAWING, by Mr. BINNS. 67

The fee for matriculated students (exclusive of the laboratories) is £20 for two years, in one payment, or two annual payments of £20.

Pupils are received in the Royal College of Chemistry (the laboratory of the school), under the direction of Dr. Hofmann, at a fee of £10 for the term of three months. The same fee is charged in the metallurgical laboratory, under the direction of Dr. Percy. Tickets to separate courses of lectures are issued at £2, £3, and £4 each. Officers in the Queen's or the East India Company's service, acting mining agents and managers, may obtain them at half the usual charge.

Certificated schoolmasters, pupil teachers, and others engaged in education, are admitted to the lectures at reduced fees.

H.R.H. the Prince of Wales has granted Two Exhibitions, and others have also been established.

For a prospectus and information, apply at the Museum of Practical Geology, Jermyn-street, London. TRENHAM REEKS, Registrar.

THE DEVON BORRADALE PLUMBAGO MINES.
In 4000 shares.—Deposit 10s. per share on allotment.
On the "COST-BOOK SYSTEM."

Those valuable lodes of black lead which were lately discovered near Bridford, Devonshire, having just been visited and approved of by some influential parties and competent judges of the article, from Bristol and Manchester, it has been resolved that the applications for shares shall not be received beyond the 10th inst., to be made to Mr. FULLER, the purser, at the office, 51, Threadneedle-street, who will give a prospectus and form of application for shares.

N.B. It is guaranteed by the promoters that the call shall not exceed 3s. per share, which will enable this concern to become at once a dividend mine, the ore being cheaply got and abundant, and its purchase already contracted for by manufacturers in various parts. 65

HIBERNIAN MINE COMPANY.
—Notice is hereby given, that the DIVIDEND of TEN SHILLINGS per share, free of income tax, declared at the last Quarterly Meeting, held on the 7th August, 1856, will be PAID to the registered shareholders, at the office, No. 17, Crow-street, Dublin, on and after the 1st September, 1856. The share certificates are required to be lodged in the office two days previously to the payment of the dividend thereon. 69

ROYAL SANTIAGO MINING COMPANY.
—The Directors hereby give notice, that a SPECIAL MEETING of the shareholders will be HELD at the office of the company on Wednesday, the 10th day of September next, at Two o'clock precisely.—38, Broad-street-buildings, Aug. 25, 1856. 70

THE LONDON AND VIRGINIA GOLD AND COPPER MINING COMPANY.
—Notice is hereby given, that the undermentioned SHARES in this company, which have been FORFEITED, under the provisions of the Bye-Laws, WILL BE SOLD, BY AUCTION, by Mr. THOMAS JOHNSON, at the City Auction Rooms, 39, Gracechurch-street, London, on Monday, the 6th day of October next, at One o'clock in the afternoon.

By order of the Board of Directors,
34, Lime-street, London, Sept. 1, 1856. JOHN ANDERSON, Sec. and Cashier. 71

Numbers of the shares above referred to:—1961 to 2010, 3186 to 3235, 23,061 to 23,110, 23,111 to 23,130, 24,706 to 24,745, 851 to 1150, 35,001 to 35,400, 9741 to 9940, 18,351 to 18,410, 32,831 to 32,895, 38,001 to 38,025, 10,301 to 10,325, 501 to 600, 8066 to 8115, 25,196 to 25,205, 28,971 to 29,020, 2986 to 3185, 9196 to 9295, 8196 to 8395, 28,471 to 28,570, 23,131 to 23,330, 1651 to 1750, 23,331 to 23,405, 22,851 to 22,910, 28,721 to 28,820, 32,931 to 32,980, 5691 to 5790, 30,871 to 31,370.

DUNN, HATTERSLEY, AND CO., MANUFACTURERS
of the PATENT ANTI-EXPLOSIVE BOILERS, Improved Marine Boilers, Patent Portable Boilers, Patent Fire Boxes for increasing the power of boilers, Patent Water Heaters for ditto, Iron Bridges, Girders, Tanks, and TURN-TABLES, Switchings and Crossings, Cranes of all sizes, TRAVERSERS, Screw Jacks, Blocks, Railway Plant, Tools and Fittings of every description.
Windsor Bridge Ironworks, Manchester. 72

BOILER EXPLOSIONS.—The frequent recurrence of steam-boiler explosions, attended with melancholy consequences, has long excited the serious consideration of scientific men in all nations, and in England has caused the establishment of a society for the special object of preventing them. The proceedings of this most useful and energetic body have been from time to time recorded in our Journal, and the result of their labours cannot but be considered as highly satisfactory—having proved generally beneficial. Notwithstanding their efforts, there yet remains much to be done to increase the safety of those employed. By the recent explosion at Hampson Mills, near Bury, 10 human beings were hurried into eternity; and there certainly appears some cause to doubt whether the boiler which exploded was in a fit state for working under any circumstances, much less with more than ordinary pressure. Mr. Baldwin, consulting engineer, was appointed by the coroner to make an inspection of the scene of the accident, and report thereon. In his report, he states that the diameter of the boiler which exploded was 9 ft. 1 in., and its length 36 ft. 6 in., the thickness of the shell being ⅜ in. The boiler had been patched at the bottom, and, from calculations, it appeared that the pressure was about 40 lbs. on the square inch, which he thought ample to produce the dreadful havoc it had done. He considered that the use of old boilers more than 6 ft. diam. could not be too highly censured, when the pressure exceeded 20 lbs. The exploded boiler was not of the best construction, the ends being badly stayed, and the plates riveted together with the longitudinal joints continuous, thereby losing one-third of its retaining power: 34 lbs. to the square inch would have been about a fair pressure to have worked it, supposing all the plates in good condition, and the boiler judiciously stayed. In reference to this explosion, Mr. Dunn (of the firm of Dunn, Hattersley, and Co., whose duplicate retort boiler we have so frequently noticed) remarks that much of the danger to be feared arises from the use of large-sized boilers; and when the facts which were adduced at the inquest on the bodies of the sufferers at Bury are considered, there appears some ground for acknowledging the justice of the assertion—the aggregate pressure upon the one boiler being 2534 tons, which is certainly a risk of pressure that ought not to be allowed to exist. Although, in the explosions which have occurred, the pressure has been usually under 50 lbs., and seldom over 100 lbs., it has been proved by actual experiment that it required a pressure of 525 lbs. to burst one of Messrs. Dunn and Hattersley's retorts; and even in the event of such an accident occurring whilst the improved boiler is in operation, the damage must necessarily be considerably diminished, since the surface injured would be much less. A detailed description of the contrivance was published in our last Journal.

ELECTRIC TELEGRAPHS.—Signor G. A. Tremeschini, of Vicence, in Venetian Lombardy, has patented some improvements in Electric Telegraphs, which consist of a receiver or apparatus for receiving the electric despatches, a manipulator, or apparatus for sending them off, a moveable key for transmitting secret despatches, and arrangements for the metallic circuit over the line. The receiver is furnished with requisites of Morse's printing and of the ordinary dial apparatus, and receives and impresses in a durable manner on the paper the despatches received by any manipulator of these two systems. The same resembles an ordinary dial apparatus, but which, instead of being actuated by a spring, is kept constantly ready for motion by the friction of the strip of paper for the despatches, which paper is moved by clock-work, and by a grooved cylinder is kept compressed against the axis on which is fixed the dial hand, which axis is also furnished opposite the grooves of the said cylinder with a small principal impression wheel, the number of blunt teeth of which is only one-half of the number of letters on the dial plate; whereas, a second or third wheel, fixed on the same axis, and furnished with one or two teeth only, serve for controlling. The strip of paper progresses in a uniform manner, whereas the impression wheels turn according to the will of the attendant who sends the despatch, because of the armature of the escapement being acted upon by his opening and closing the electric circuit, so that the length of time left between each opening and closing of the circuit will give rise to the impression either of a point or line, or of a more or less great blank space, at the exact place of the letter which is wished to be transmitted, and which will have been indicated also by the hand on the dial. For this reason the points and lines on Morse's alphabet may also be transmitted by means of the small electric force required for the dial system. Another part of the invention consists in an improved manipulator for transmitting electric despatches according to Morse's system. This manipulator is furnished with a sort of circular keyboard, the keys of which act vertically, and have each of them a metallic letter type in relief fixed to their lower extremity, and a small detent by which they are kept in their depressed position after the finger has left them, and till they become liberated by the action of the lever arm, when they rise again in their normal position. On depressing the key the type fixed to the same comes in metallic contact with one of the extremities of the communicating wire of the line. In the middle of the keyboard circle an axis kept constantly in rotation by any suitable means, and to which is fixed the above-mentioned lever arm, situated under the types, and furnished at its end with a small wheel and a moderator and one tooth; none of these parts come in contact with the types, with the exception of the small wheel, which, during the rapid rotation of the lever arm, comes to strike in succession against each of those types of which the keys are depressed, and by which and the moderator the lever arm is delayed in its motion, while in the same moment the metallic contact taking place with the types, the electric current is transmitted by the axis to the end of the communication wire. The moveable key for transmitting secret electric despatches consist of a table divided in an undetermined number of lines, each of which is subdivided in as many compartments as there are letters in the alphabet to be employed, and to which is annexed a compartment for the intervals between the words. On the first line the alphabet has inscribed in a regular, whereas on each of the others in a different, irregular manner. In order to form or to decipher a despatch, it will be required for finding the letter in the lines and compartments of the key, to follow the rule which has been agreed upon, previously observing that each line has to furnish only one letter at the time. Another part of the invention consists in a peculiar arrangement for the metallic contact over the line, resembling the closed circuit system, but with this difference, that the circuit is not permanently closed, but only during certain determined intervals or pulsations, by means of a mechanical arrangement with which the receiving apparatus of each station is furnished, and which is put in motion by the attendant of the station who has sent off the last despatch, and which apparatus may be stopped in the moment of its pulsation by the attendant of each station who wishes to transmit a despatch, by opening the metallic contact on its own manipulator during a determined time.

CORNISH STEAM-ENGINES.

The number of pumping engines reported by *Lean's Engine Reporter* for the month of July is 23. They have consumed 1777 tons of coal; and lifted 14,750,000 tons of water, 10 fms. high. The average duty of the whole is, therefore, 56,000,000 lbs. lifted 1 foot high, by the consumption of 112 lbs. of coal, or 47,000,000 lbs. by a bushel weighing 94 lbs.

In the Court of Vice-Warden of the Stannaries.—Stannaries of Cornwall.

DINGLE v. STEWART.

IN RE NORTH PHŒNIX MINE.

NOTICE IS HEREBY GIVEN, that, pursuant to the ORDER, or DECREE, made in the above-mentioned cause, and bearing date the 6th day of August inst., a PUBLIC AUCTION will be HOLDEN at Webb's Hotel, Liskeard, on Monday, the 15th day of September next, at Three o'clock in the afternoon, for SELLING SIXTY (4000ths) PARTS, or SHARES, of the above-named Defendant, of and in the said MINE, or as many of the said several shares as may be necessary to satisfy the said Order, or Decree, and of and in the ORES, HALVANS, ENGINE, MACHINERY, and OTHER EFFECTS, upon and belonging to the said MINE.

For further information, application may be made of Mr. ANSTIS, solicitor, Liskeard; or to Mr. CHILCOTT, solicitor, Truro.
Dated Registrar's Office, Truro, Aug. 29, 1856. 73

MINE MATERIALS FOR SALE AT LAMERHOOE WHEAL MARIA.

MESSRS. DAVIS, SON, AND VOSPER WILL SELL, BY PUBLIC AUCTION, the MACHINERY and MATERIALS on LAMERHOOE WHEAL MARIA, in the parish of Lamerton, in the county of Devon, on Thursday, the 11th of September, 1856, comprising a 60 in. STEAM-ENGINE, 10 ft. stroke in cylinder and shaft, with two boilers, about 10 tons each, as good as new, balance-bob, saddles, brasses, fixings, and bearings, complete.

80 fms. 6½ in. whim-rope.	1 4 ft. 4 in.-10 in. windbore.
1 capstan.	1 9 ft. 4 in.-9 in. windbore.
5 9 ft. 11 in. pumps.	1 4 ft. 8 in.-9 in. windbore.
1 2 ft. 10 in. pump.	1 9 in. doorpiece.
8 9 ft. 9 in. pumps.	1 6 ft. 9 in. door and doorpiece.
1 10 ft. 12 in. working.	2 doorpieces.
1 10 ft. 11 in. working.	1 10 in. H-piece.
1 10 ft. 10 in. working.	2 doors of doorpieces, new.
1 14 ft. 8 in. working.	Stuffing-boxes and glands.
1 9 ft. 12 in. working.	Plunger-case.
1 6 ft. 10 in. working, and 2 matchings.	Several matchings.

An excellent water-wheel, 25 ft. in diameter, 2 ft. abreast, with axle and heads' stamps, complete; horse-whim; 12 ft. cage, with spare beam, &c.; several tons of rod plates; lot of 6, 7, and 8 in. rods; ditto 1¼, 1½, and 2 in. bucket rods; lot of 1½ in. surface rods; several pairs of double and treble blocks; ditto caps and loops; lot of chain, bolts, &c.; a capital lot of staples and glands; several tons of round, flat, and square iron, of different sizes and lengths; a quantity of blister and gad steel; lot of iron; 42 and 36 in. smiths' bellows; vices; bevels; an excellent lot of smiths' tools; a lot of east-steel borers; cast-iron ditto; a quantity of miners' tools; handscrew; boring machine; cross-cut saw; 2 beams, scales, and weights; carpenters' bench, large size; 9 chests, of different sizes; iron bar ladders; kibbles; wood air-pipes; pulleys and stands; a quantity of timber; lot of launders; boxes and pronga; clack seatings; whim and tackle ropes; shovel hilts; safety fuse; lot of powder; anti-friction grease; about 20 tons of engine coals; an excellent boat; and numerous other useful articles. Also, the account-house furniture; an excellent dial, quadrant, and chain.

Refreshments on the table at Twelve, and the sale to commence at One o'clock.
For further particulars, apply to the auctioneers, Tavistock.—Dated Aug. 27, 1856. 74

TO CHAIN AND ANCHOR-SMITHS, ALKALI MANUFACTURERS, SHIP-BUILDERS, AND OTHERS.
FLINT FORGE AND MALLEABLE CAST-IRON FOUNDRY, &c.

MR. ORMISTON WILL SELL, BY AUCTION, at the Royal Oak Inn, in the town of Flint, on Thursday, Sept. 18, 1856, at three o'clock in the afternoon, in the following or such other Lot or Lots, as may be decided upon at the time of sale, and subject to conditions to be then produced:—

LOT I.—All those important and well-situate business premises known as the FLINT FORGE, comprising (as they now stand) two high-pressure steam-engines, of 25 and 10-horse power respectively, with two cylindrical boilers and fittings attached; hammer helve, trains of roughing and bar rolls, with holsters and couplings complete; shears, straightening block, floor plates, &c.; two puddling and one charcoal furnaces; a blowing cylinder, with receiver, pipes, and cupola.

The portion of the works adapted to the manufacture of malleable iron castings includes crushing-mill, with 16-in. rolls; melting pot and annealing furnaces; moulding, casting, and crucible shops; warehouse, smiths and carpenters' shops, &c.; office and store room.

And also all that YARD lying between the Forge and Flint Castle, and abutting on the Cop of the River Dee, well adapted for a timber yard and shipbuilding purposes.

This lot is held under long leases at moderate ground rents, and from its position on the River Dee, and contiguity to the Chester and Holyhead Railway, is admirably situated as business premises.

LOT II.—All that MESSUAGE or DWELLING HOUSE, situate at Castle Hill, with the walled garden and yard belonging thereto, in the occupation of Mr. Brown. Several tons of coke, Stourbridge clay, crabwinch, iron and wood patterns, old metal, tools, &c., will either be sold by auction, or may be taken by the purchaser of the works at a valuation, as may be determined upon, or the proprietor will sell off separately the whole or any portion of the steam-engines, machinery, or tools, if a reasonable offer is made for the premises.

Further particulars may be had on application to Messrs. POTTS and ROBERTS, solicitors, Chester; Mr. GATLIFF, solicitor, 19, Coleman-street, London; Mr. JOSEPH HOWELL, Hawarden; or to the auctioneer, St. Asaph.
Wigfair, St. Asaph, Aug. 1856. 75

CHEADLE, STAFFORDSHIRE.—TO COPPER, BRASS, AND SPELTER MANUFACTURERS, AND MILLOWNERS.

MESSRS. EDWARDS WILL SELL, BY AUCION, at the Royal Oak Inn, Cheadle, in the county of Stafford, on Friday, October 3d, 1856, at Three o'clock in the Afternoon, subject to conditions to be then produced, the undermentioned valuable FREEHOLD PROPERTY, situated at the Brass-Works, near Cheadle, in the county of Stafford, in the following and such other lots as may be agreed upon at the time of sale.

No. on plan.	Description of property.	Quantities. A.	R.	P.
	LOT 1.			
1	A close of land, called the Slang	0	0	34
	LOT 2.			
2	Garden	0	0	17*
3	Ditto	0	0	8*
4	Ditto	0	0	10*
5	Ditto	0	0	16*
6	A close of land, called Stable Field, in the occupation of A. Blagg, Esq.	1	1	9*
7	A dwelling-house and garden, in the occupation of Widow Hall	0	1	10*
8	All those extensive and commodious copper and brass works, with water, crushing-mill, melting-house, washhouse, charcoal-house, pot-chambers, and large warehouses, blacksmith's shop, and other conveniences; also two workmen's cottages; the whole including the extensive yards, &c., containing	2	2	29*
	(* Total 4a. 2r. 19p.)			
	LOT 3.			
9	All those valuable and extensive copper and spelter smelting-works, with roaster, furnace, and other conveniences, and possessing the advantage of a chimney-shaft of great elevation, commanding an immense draught for the furnaces; also various buildings, and two workmen's cottages; containing, including the extensive yards (as now staked out)	4	2	10
	LOT 4.			
10	A genteel dwelling-house, with convenient out-buildings, and garden fronting to the turnpike-road from Stone to Cheadle, in the occupation of Mr. John Keys (as now staked out)	0	3	8†
11	A close of excellent pasture land, called the Riddings, having a considerable frontage to the turnpike-road from Stone to Cheadle	3	3	0†
	(† Total 4a. 2r. 8p.)			
	LOT 5.			
12	Osier-bed	0	3	4‡
13	A close of excellent meadow land, called Berridge Field	3	1	3‡
14	Plantation	0	0	22‡
15	Dwelling-house, carpenter's shop, stable, and garden, fronting to the said turnpike-road from Stone to Cheadle, in the occupation of William Inskipp (as now staked out)	0	1	11‡
	(‡ Total 4a. 2r. 7p.)			

LOT 1—Is well situated for building purposes.

LOT 2—Affords a good site for the erection of a silk or other mill requiring a large number of hands, which might be obtained at moderate wages; part of the buildings on this Lot might if desired be converted into cottages at a small expense. The present affords a favourable opportunity for entering upon the business of a copper and brass smelter, which has long been carried on at the works now offered for sale.

Plans of the property may be inspected at the place of sale, at the office of Mr. CHARLES SMITH, jun., Land Surveyor, Alton, near Cheadle, and at the office of Messrs. WARD, SON, and COLLIS, Solicitors, Newcastle-under-Lyme, from either of whom further particulars may be obtained.

TO BE SOLD (as a going concern), pursuant to an Order of the High Court of Chancery, made in the Causes of "MOLD v. MOLD," and "MOLD v. MOLD," with the approbation of the Judge to whose Court the said causes are attached, at the King's Head Hotel, in the town of Derby, on Tuesday, the 7th day of October, 1856, at Four of the clock in the afternoon precisely, the valuable FREEHOLD and LEASEHOLD PARTNERSHIP PROPERTY, IRON and COAL MINES, COLLIERIES, and OTHER WORKS and BUSINESSES, LANDS, TENEMENTS, and HEREDITAMENTS, of and belonging to the late partnership firm of Messrs. CHARLES, CHARLES JOHN, and WILLIAM HENRY MOLD, situate at Morley Park and Alderwasley, in the county of Derby.

Printed particulars and conditions of sale, and all further information and particulars required, may be had gratis, in the country, of Messrs. MILNES and NEWBOLD, solicitors, Matlock, Derbyshire; Messrs. SIMPSON, solicitors, Derby; Messrs. DIBB, ATKINSON, and PIPER, solicitors, Leeds; Mr. STONE, the managing receiver, The Wardwick, Derby; and in London, of Messrs. BOYS and TWEEDIE, 6, Ely-place, Holborn; Mr. W. G. TAYLOR, solicitor, 24, John-street, Bedford-row; and Messrs. HAWKINS, BLOXAM, and HAWKINS, solicitors, 2, New Boswell-court, Lincoln's Inn; and of the auctioneer, The Wardwick, Derby. HY. LEMAN, Chief Clerk.
BOYS AND TWEEDIE, 6, Ely-place, London.
MILNES AND NEWBOLD, Matlock, Derbyshire. 77

MINE MACHINERY FOR SALE BY PRIVATE CONTRACT.—An excellent 70 in. cylinder PUMPING ENGINE, 12 ft. stroke in the cylinder, and 10½ ft. in the shaft, with two boilers 26 tons; new three years ago.

An excellent 24 in. cylinder DOUBLE-ACTING STAMPING ENGINE, 9 ft. stroke, with one boiler about 10 tons, and 36 heads of stamps, with iron axles and lifters, complete; new within two years.

A nearly new DRAWING MACHINE, complete.

A 46 ft. WATER-WHEEL, 3 ft. breast (within), with cast-iron axle and sockets, two sweep rods, and balance-bob, complete.

45 fms. 20 in. PLUNGER-LIFT, complete.
St. Austell, Aug. 13, 1856. J. J. GUMMOE. 78

HIGH-PRESSURE STEAM-ENGINES, HORIZONTAL or VERTICAL, 5, 8, 10, 14, to 25-horse power, at £8 to £9 per horse power, delivered in London. Can be fitted up in any part of the country.—Drawings and prices to be had on application to W. T. HENDRY and Co., engineers, &c., No. 33, Upper Thames-street, London. 79

MR. WHEATLEY KIRK begs to call the attention of Contractors, Mining Agents and Miners, Shipbuilders, Machinists, &c., to his most excellent STOCK of HIGH-PRESSURE HORIZONTAL and VERTICAL ENGINES; also, to his LARGE STOCK of NEW TOOLS, LATHES, SLIDE and SCREW-CUTTING, PLANING, DRILLING, and SHAPING, PUNCHING and SHEARING MACHINES, &c.; all of the best make and materials, and which can be seen on application to WHEATLEY KIRK, Cross-street Chambers, Manchester. 81

BANK QUAY FOUNDRY, WARRINGTON.

MR. WHEATLEY KIRK is instructed to SELL, BY AUCTION, early in October next, the WHOLE of the exceedingly valuable TOOLS, UTENSILS, MACHINERY, GUN MILLS, STEAM-ENGINES, BOILERS, &c., on the premises. Further particulars in future papers.
Auctioneer's Offices, Cross-street Chambers, Manchester. 80

MESSRS. DAWSON AND KNIGHT WILL SELL, BY AUCTION, at Garraway's Coffee House, Change-alley, Cornhill, London, on Tuesday, the 23d day of September, 1856, at One o'clock precisely, in One Lot, ALL that MINING PROPERTY known as the PERRAN AND GREAT WHEAL LEISURE UNION MINES, situate in the parish of Perranzabuloe, in the county of Cornwall, together with the ENGINE-HOUSES, STACK, and BOILER-HOUSES, and other useful and requisite BUILDINGS, with the PLANT thereon, including one 80 in. cylinder steam-engine, and four boilers, complete; one 24 in. cylinder (double) winding engine; and all other the MACHINERY and MATERIALS now on the said mines, comprising all that is necessary for effectually working and carrying on the said mines.

These mines are held on leases from His Royal Highness the Prince of Wales and Duke of Cornwall, the Right Hon. Viscount Falmouth, John Samuel Enys, Esq., and John Oates, Esq., and others, and have been worked only about four years, during which period the adventurers have expended thereon about £33,000. All the machinery and materials were purchased new, and they are now in a good and substantial state of repair.

These extensive mines and the materials and machinery are offered in One Lot, to give capitalists an opportunity of obtaining a property which they may at once proceed to develop.

May be viewed at any time previous to the sale, on application at the mines; to Capt. JOHN TONKIN, of Pool, near Camborne, and Capt. CHAS. THOMAS, of Dolcoath Mine, the agents of the mine; to the auctioneers, at their offices, Mortimer-street, Cavendish-square; or to the secretary, at the offices of the company, 33, Broad-street-buildings, London. Particulars and conditions of sale may be obtained on application to Mr. ARUNDEL ROGERS, solicitor, 33, Old Jewry, London. 82

NOTICE.—TO MINE AGENTS, ENGINEERS, AND OTHERS.—NEW and valuable MINING MATERIALS at GREAT WHEAL HUGO, in the parish of Lamerton, Devon, FOR SALE.—The SALE of the WATER-WHEEL, 40 ft. by 3 ft. abreast, with wrought-iron axle, &c.; a 10 in. cylinder horizontal rotary condensing engine, 3 ft. stroke, with boiler about 4 tons, attached to which is a wheel and pinion for pumping purposes, shaft, plomer blocks, brasses, and crank, all in first-rate condition; 30 fms. of 10 and 11 in. pitwork, complete; launders and stands; balance; shaft and travelling bobs; 20 fms. of 6 in. wood rods; bucket and other rods; pulleys; whim and other ropes; horse-whim; double purchase crab; miners and smiths' tools; wood sheds and roofs; Norway and other timber; ladders; iron; and every other material now on the said mine, as advertised for sale on the 21st of August, and postponed in order to take up the pitwork, WILL NOW POSITIVELY TAKE PLACE on Tuesday, the 9th September inst., and sold without reserve, by W. MONK, auctioneer.

Refreshments on the table at Twelve, and the sale to commence at One o'clock.
Dated Abbey, Tavistock, Sept. 1, 1856. 83

GLAMORGANSHIRE.—FREEHOLD MINERAL PROPERTY.
FOR SALE, BY PRIVATE CONTRACT, ALL the several VEINS of highly BITUMINOUS COAL lying under the FARM of YSTRAD-ISSA, in the parish of Swansea, together with the said FARM, which consists of about 120 acres of ARABLE LAND, now let to a respectable tenant. The property contains four veins, of the thickness of 3, 4, 5, and 6 ft. respectively, and is adjacent to the South Wales Railway, which passes on the west and south sides of it. Some of the veins are worked by collieries now in full operation on the adjoining properties.—For further information, apply to Mr. W. LEYSON, Neath, Glamorganshire. 84

ST. JOHN'S, SWANSEA.—SALE OF IMPORTANT FREEHOLD BUILDING LAND, AND HOUSE AND MINERAL PROPERTY, of the annual surface value of £500.—TO BE SOLD, BY PRIVATE CONTRACT, ALL those FREEHOLD ESTATES called PENLLWYNMARCH, PWLLY-DOMMEN, and PENLLWYN ROBERT, in the parish of St. John juxta Swansea, Glamorganshire, together with the valuable MINERALS under the same, and also under certain lands called White Meadows and Pentre Mawr, presenting an uninterrupted field extending over between 200 and 300 acres of land, in a ring fence, within one mile of the town and port of Swansea, and in the immediate neighbourhood of the Harford, Morfa, and other copper works, and of zinc, silver, and other smelting works and manufactories, and possessing the advantage of communication to Swansea and all parts of England by means of the South Wales and other railways.

Particulars, with plans annexed, may be had at the office of Messrs. WALTERS, ROUMIEU, and YOUNG, 9, New-square, Lincoln's Inn; of J. T. JENKYN, Esq., solicitor, Swansea; and of Mr. JAMES HALL, surveyor, Swansea; who are authorised to treat for the sale. 85

TO BE DISPOSED OF, a FIRST-RATE LEAD and COPPER SETT.—Apply to Capt. WM. VERRAN, Llanidloes, N. W. 81

TO IRON SHIPBUILDERS.—TO BE SOLD, BY PRIVATE CONTRACT, ALL those valuable and extensive PREMISES, lately occupied by Messrs. Coutts and Parkinson, situate at WILLINGTON, near Newcastle-on-Tyne, with the necessary MACHINERY and APPLIANCES for carrying on an extensive business in IRON SHIPBUILDING. The premises possess a large river frontage, and offer in every way a most favourable opportunity for commencing the above business, for which the Tyne has now established a reputation equal to that of any port in the kingdom.—Further particulars may be had on application to Mr. P. H. STANTON, solicitor, Newcastle-on-Tyne. 87

FOR SALE.—ONE NEW 38 in. bored CYLINDER, 6 ft. stroke.
ONE large BORING LATHE BED, planed on upper surface.
ONE NORRIS' PATENT CUPOLA, nearly new.
ONE 15-horse STEAM-ENGINE, and FOUR 5-horse ditto; the former may be seen at work.
Quantity of 13 in. GOVERNMENT SHELL PATTERNS and BOXES.
Apply to J. A. SHIPTON, Union Mill-street, Wolverhampton. 88

STATIONARY STEAM-ENGINES OF THE BEST QUALITY, from 1 to 50-horse power, fitted with VARIABLE EXPANSION GEAR. These engines, which have been designed to combine great simplicity of parts with the utmost economy of action, are supplied with or without boilers, at the lowest possible rates; and erected, if required, in any part of the kingdom. General boiler and tank work carefully executed upon advantageous terms.—Apply to Messrs. WILLIAM YOUNG and Co., engineers, Barnstaple. 89

STEAM PUMPING ENGINE FOR SALE, on Sims's Patent Combined principle, 22 in. and 40 in. cylinders, 8 ft. stroke, equal beam, with 8 tons boiler, &c., in good condition, lying near Hayle, Cornwall.—For further particulars, apply to Mr. THOMAS FIELD, 2, Crown-court, Threadneedle-street, London. 90

LAND AND MINES.—TO BE LET, OR SOLD, an ESTATE called HOUGHWOOD, situate in the parish of Stoke-upon-Trent, Staffordshire, and about four miles from Hanley, and containing 76 acres, or thereabouts, with the dwelling houses thereon.

There is every reason to believe that this estate abounds in IRONSTONE. A shaft has been sunk about 6 yards on a part of the estate, and several bands of ironstone were passed through, varying in thickness. The canal adjoins the estate, and a tramway may be made from the shaft to it with the greatest ease.

Applications to be made to Mr. COPE, mine agent, Hanley, Staffordshire; Mr. E. JONES, engineer, Donnington Wood, Salop; and Mr. HENRY HEANE, solicitor, 12, Carlton Chambers, Regent-street, London, and Newport, Salop. 91

TO LET, an old and valuable TIN and COPPER MINE, known as the WHEAL UNION, with a range of 90 acres of land, situated within two miles of the Stannary town of Ashburton, Devon. It has been worked for centuries by water-power only to the depth of about 50 fms., having numerous shafts and adits; but a deficiency of water now renders a steam-engine necessary, which is the main expense requisite to produce an immediate return, power only being required to clear the mine of water to work the lodes at once. The ores sold by a former company, obtained by inadequate means from this and the adjoining property, produced £13,977 in less than three years, raised at an average tribute of less than 10s., or half profit, clearly showing what could be done by steam-power. The strata consists of grey killas, or clay-slate, so proverbial for richness in tin and copper lodes. There are three lifts of pumps and rods in the engine-shaft; also, counting-house, &c., on the premises. The terms to a responsible party will be liberal.

For particulars, apply personally, or by letter, to S. P. KNOWLES, Esq., 32, New Park-road, Stockwell, Surrey, where plans, specimens, &c., may be seen. 92

COPIAPO EXTENSION RAILWAY COMPANY.—Notice is hereby given, that the SCRIP CERTIFICATES will be EXCHANGED for the BANKERS' RECEIPTS, at the offices of the company, on and after Tuesday, the 2d September, between the hours of Twelve and Three.
2, New Broad-street, Aug. 30, 1856. EDWARD J. COLE, Sec. 93

UNITED STATES OF AMERICA.—DUPEE, PERKINS, and SAYLES, BOSTON, MASSACHUSETTS, BROKERS for the PURCHASE and SALE of STATE, CITY, and RAILROAD SECURITIES, MANUFACTURING and BANK SHARES, give particular attention to the MINING COMPANIES OF LAKE SUPERIOR, and furnish reliable information concerning them.
[DUPEE, PERKINS, and SAYLES refer to the Editor of the *Mining Journal*.] 94

MESSRS. FULLER AND CO., 51, THREADNEEDLE STREET, LONDON, continue to TRANSACT BUSINESS in all DIVIDEND MINES, many of which are paying 20 per cent.; also, in those of a PROGRESSIVE character, such as hold out a promise of enhancing in value, and of becoming permanently safe investments, at the same time limiting this class of property from liability.

BUSINESS TRANSACTED in BANKING, INSURANCE, RAILWAY, and other SECURITIES, at the closest price of the day.

WANTED, at present quotations.—Alfred Consols, Bedford United, Botallack, Condurrow, Devon Great Consols, Gonamena, Hingston Down, Rosewarne, South Wheal Frances, Sortridge Consols, West Caradon, Wheal Arthur, Buller. Also, in the following Progressive Mines—Ballyvirgin, Calstock Consols, Exmouth Consols, Craddock Moor, Gawton United, Great Wheal Baddern, Lady Bertha, Swanpool, Wh. Edward, Ludcott, Trefusis, Great Wheal Alfred, Great Hewas, North Wh. Robert. 95

HOUSE AND COTTAGE JOINERY.—The CHEAPEST HOUSE in LONDON for HOUSE JOINERY is at THOS. LEWIS'S, 44, REGENT'S ROAD, RHODESWELL ROAD, STEPNEY. Full-size Doors from 7d. per foot; Sashes and Frames from 9d. per foot superficial; and every description of joinery equally low. Packed and sent to any railway station. A full list of prices forwarded on application. 96

OVERLAND ROUTE.—STEAM TO INDIA AND CHINA, &c., VIA EGYPT.—The PENINSULAR AND ORIENTAL STEAM NAVIGATION COMPANY BOOK PASSENGERS and RECEIVE GOODS and PARCELS for the MEDITERRANEAN, EGYPT, ADEN, BOMBAY, CEYLON, MADRAS, and CALCUTTA, by their mail packets leaving Southampton on the 4th and 20th of every month; and for CHINA and the STRAITS, by those of the 4th of the month.
For further particulars, apply at the company's offices, No. 122, Leadenhall-street, London; and Oriental-place, Southampton. 97

STEAM COMMUNICATION TO AND FROM ABERYSTWITH AND LIVERPOOL, CALLING AT PORTMADOC; AND ABERYSTWITH AND BRISTOL, CALLING AT LLANELLY.
The CAMBRIAN STEAM PACKET COMPANY (LIMITED), until the completion of the new iron screw steamer, the "Plynlymon," now building for them, and unless prevented by any unforeseen occurrence, intend DISPATCHING, with goods and passengers, the powerful SCREW STEAMER "REGALIA," 200 tons burthen, or some other vessel suitable for the trade, on the days and hours hereunder mentioned:

Monday	Sept. 1,	leave	Liverpool	for	Aberystwith,	at 12.30 after.*
Tuesday	" 2,	"	Portmadoc	"	Aberystwith	" 9. after.
Wednesday	" 3,	"	Aberystwith	"	Bristol	" 9. after.†
Thursday	" 4,	"	Llanelly	"	Bristol	" 9. even.
Saturday	" 6,	"	Bristol	"	Aberystwith	" 8.30 morn.†
Sunday	" 7,	"	Llanelly	"	Aberystwith	" 10.30 even.
Tuesday	" 9,	"	Aberystwith	"	Liverpool	" 7. morn.‡
Friday	" 12,	"	Liverpool	"	Aberystwith	" 10. even.‡
Monday	" 15,	"	Aberystwith	"	Liverpool	" 6.30 even.*
Tuesday	" 16,	"	Portmadoc	"	Liverpool	" 8.30 even.
Friday	" 19,	"	Liverpool	"	Aberystwith	" 2.30 after.*
Saturday	" 20,	"	Portmadoc	"	Aberystwith	" 11. even.
Monday	" 22,	"	Aberystwith	"	Bristol	" 12. 4 after.†
Wednesday	" 24,	"	Llanelly	"	Bristol	" 1.30 morn.
Thursday	" 25,	"	Bristol	"	Aberystwith	" 2. after.†
Friday	" 26,	"	Llanelly	"	Aberystwith	" 5. after.
Monday	" 29,	"	Aberystwith	"	Liverpool	" 5. morn.*
Tuesday	" 30,	"	Portmadoc	"	Liverpool	" 7. even.

* Calling at Portmadoc. † Calling at Llanelly. ‡ Calling at Caernarvon.
FREIGHTS MODERATE. 98
N.B. Passengers are requested to take charge of their own luggage, as the company will not be responsible in any way for its safety. Horses, cattle, and vehicles of all kinds, are shipped on deck at the owner's risk. The company will not be answerable for any packages above the value of £10, unless the value thereof be previously declared, and paid for accordingly; nor for any loss of time, or accident occasioned by their steamer being engaged in the towing or salvage of any other vessel, nor for hazardous goods, unless so declared at time of shipping.
For freights and further particulars, apply to the secretary, at the company's head offices, Parthenon Chambers, 14, Regent-street, London; or to the agents, E. T. Turner, 12, Quay-street, Bristol; McClune and Tamplin, Columbia-buildings, Brunswick-street, Liverpool; George Green, Cambrian Foundry, Aberystwith; David Rees, Llanelly; Bennett Williams, Harbour Office, Portmadoc; and F. E. TUCKER, 4, Water-lane, Tower-street, London.

PATENT FURNACES AND STEAM BOILERS.—LEE STEVENS'S FURNACES PREVENT SMOKE, ECONOMISE FUEL, INCREASE STEAM, extend the flame through the flues, and are easily and safely adapted to any evaporative or heating purpose. Official reports, working drawings, accumulating hundreds of references, and other practical information, at No. 1, Fish-street-hill, City, where particulars are also given of LEE STEVENS'S PATENT SAFETY STEAM BOILERS, marine and land. 99

SELF-ACTING SAFETY ALARM FOR BOILERS.—TO COLLIERY OWNERS AND MANUFACTURERS.—JOHNSTON'S simple PATENT ALARM has now been PROVED to be CERTAIN and EFFECTUAL IN ACTION. Any disarrangement of the water supply to the boiler, or neglect on the part of the attendants, is immediately made known in the vicinity, and previous to any immediate danger. Price 50s.—Further particulars, with a drawing, may be had upon application to Mr. Watson, High Bridge Works, Newcastle-on-Tyne, sole manufacturer, who can furnish the highest testimonials of their efficiency.
Also, always on hand, WATER and PRESSURE GAUGES, of the most approved kind; as well as the MINERS' SAFETY LAMPS, of the best description. 100

GARDNER'S PATENT STEAM GENERATOR AND SMOKE CONSUMER produces MORE STEAM, with LESSENED CONSUMPTION OF FUEL, and ENTIRE REMOVAL OF SMOKE. These patented inventions are highly recommended for their simplicity, durability, and great economy. They are self-acting, and have no moving parts, therefore require no external aid. They are applicable to all furnaces, locomotives, marine engines, ovens, pottery and other kilns, common fires, kitchen ranges, hall and hatters' stoves.
Applications to be made to the patentee, 24, Norfolk-street, Middlesex Hospital; to Messrs. Burridge and Healy, 118, Dorset-street, Fleet-street; or to Z. D. Berry, Albion Works, Wilton-road, Pimlico.
Testimonials, &c., may be seen upon application. 101

MESSRS. R. & J. COUPE, ENGINEERS and IRONFOUNDERS, MANUFACTURERS of HORIZONTAL HIGH-PRESSURE STEAM-ENGINES, from 10 to 200-horse power; the larger description of engines mounted with their IMPROVED EQUILIBRIUM SLIDE PISTON VALVE, which has proved itself so eminently adapted for winding and other engines.
Also, MANUFACTURERS of their IMPROVED BLAST ENGINES, PUMPING ENGINES, &c. (Vide Editor's Notice in the *Mining Journal*, Aug. 30, 1856, p. 593, under the head of Improvements in Donkey Engines.)
Clayton Foundry, Wigan. 102

TO COAL PROPRIETORS.—GEORGE FORSTER'S PATENT TRAP DOORS are NOW AT WORK in some of the pits near Wigan. Their construction is simple; one door is always shut, so that a regular steady current of air is kept in the workings. The doors cannot be left open by carelessness, therefore no pits producing gas should be without them.—Testimonials and model may be seen by application to G. Forster (late Standish Colliery), New Town, near Wigan. 103

TO IRON AND COAL MASTERS.—SUBSTITUTE FOR HORSES, by NEILSON'S PATENT MINERAL LOCOMOTIVE ENGINES, which now do work formerly done by horses, and also by FIXED ENGINES on inclines, giving great satisfaction to the proprietors, and effecting an immense saving over the old horse haulage system.
The engines are simple, compact, and durable, carrying their own water and coal, and, running on four wheels, can go anywhere that an ordinary wagon can be put. The larger sizes of engines are made for the ordinary gauge, but the smaller engines are made for light rails, and of any gauge down to 32 in. 104
The following are some of the coal and ironworks in Scotland, England, and Wales, where these engines are at work:—Glengarnock, Ardeer, Eglinton, Dalmellington, Forth, Clyde, Dowlas, Pontypool, Lilleshall, Grassmoor, Ebbw Vale, Coltness, Monkland, Omoa, Gartsherrie, &c.
NEILSON AND CO., Locomotive Engine Makers, Glasgow.

TO RAILWAY CONTRACTORS, MINERS, &c.—The UNDERSIGNED RECEIVE ORDERS for AMERICAN MADE CAST-STEEL PICKS, SPADES, SHOVELS, COLLINS' AXES, &c., which will be delivered in England, India, Australia, &c., at the American manufacturers' prices, on payment of a small commission. 105
The above cast-steel tools are much lighter, more durable, and cheaper, than any yet offered, and enable the workmen to do a much better day's work.—Samples can always be seen at Sheaf Works, Sheffield. Apply to EYRE, WARD, AND CO.

HENRY J. MORTON AND CO.'S (No. 2, BASINGHALL BUILDINGS, LEEDS) PATENT WIRE ROPES, for the use of MINES, COLLIERIES, RAILWAYS, &c.; one-half the weight of hemp rope, and one-third the cost; one-third the weight of chains, and one-half the cost—in all deep mines these advantages are self-evident. References to most of the principal colliery owners in the kingdom.
GALVANISED SIGNAL CORDS AND KNOCKER LINES; will not rust or corrode, and not affected by the copper water in mines. Very strong, and not at all liable to break. Prices from 15s. per 100 yards.
PATENT ASPHALTED ROOFING FELTS, 1d. per foot.
DRY HAIR BOILER FELTS, to SAVE COAL.
PATENT BOILER COMPOUND, for bad water.
FAIRBANK'S WEIGHING MACHINES, of all sizes.
GALVANISED IRON ROOFING AND SPOUTING.
MILNER'S FIRE-PROOF SAFES.
STOCK of MINING and RAILWAY STORES in Liverpool and London:—viz., OILS, GREASES, COTTON WASTE, SPUN YARN, WHITE LEAD, VARNISHES, &c.; and at very low prices.—Address, 2, Basinghall-buildings, Leeds.
SOLE AGENTS for Prof. GLUKMAN'S ELECTRIC SIGNAL from RAILWAY GUARD to ENGINE DRIVER, and also for the use of COLLIERIES and MINES.
N.B. Illustrated price list on application. 106

MOST IMPORTANT TO COLLIERY OWNERS AND COLLIERY MANAGERS.—HENRY J. MORTON AND CO., GALVANISED IRONWORKS, No. 2, BASINGHALL BUILDINGS, LEEDS, beg to call attention to their IMPROVED SIGNAL BELL, especially prepared to meet the requirements of the new Act for the Inspection of Coal Mines. It has met with the decided approval of many large colliery owners and managers. SIMPLE, EFFICIENT, and CHEAP. Price £1 10s. each.
BYRAM'S PATENT ANEMOMETER, for testing the ventilation.
Price £3 3s. to £4 4s. each.
STEAM PRESSURE GAUGES, very strong and accurate, £2 each.
For further information, apply to
H. J. MORTON AND CO., 2, Basinghall-buildings, Leeds. 107

FAIRBANK'S IMPROVED PATENT WEIGHING MACHINES, for the use of IRONWORKS, COLLIERIES, RAILWAYS, WAREHOUSES, STORES, &c. The most ACCURATE MACHINES in use, and the cheapest.
MACHINES of all sizes, from 1 cwt. to 30 tons, for RAILWAY WAGONS, CARTS, or WAGONS.—For prices and all other information, apply to Henry J. Morton and Co., Galvanised Ironworks, 2, Basinghall-buildings, Leeds.
Asphalted Roofing Felts, Boiler Felts, Galvanised Iron, &c., in Stock. 108

CHEAP, LIGHT, AND DURABLE ROOFING, ONE PENNY PER FOOT.—HENRY J. MORTON AND CO., 2, BASINGHALL BUILDINGS, LEEDS. PATENT ASPHALTED ROOFING FELTS, for roofing sheds, contractors' cottages, ore-dressing sheds, brick and tile sheds, and all agricultural purposes. One penny per square foot. The cheapest roofing manufactured. Stocks kept in London, Leeds, and Bristol. DRY HAIR BOILER FELTS, for saving fuel.
H. J. MORTON AND CO., 2, Basinghall-buildings, Leeds. 109

ASSAY OFFICE AND LABORATORIES. DUNNING'S ALLEY, BISHOPSGATE STREET WITHOUT, LONDON.
Conducted by John Mitchell, F.C.S., Author of "Manual of Practical Assaying," Metallurgical Papers, &c.
Assays and Analyses of every description performed as usual. Special Instruction in Assaying and Analysis. Consultations in every branch of Metallurgical and Manufacturing Chemistry. Assistance rendered to intending Patentees, &c.
For amount of fees, apply to the office, as above. 110

RAILWAY WAGONS.—WILLIAM A. ADAMS AND CO., MIDLAND WORKS, BIRMINGHAM.
BROAD AND NARROW GUAGE COAL AND IRONSTONE WAGONS, *IN STOCK—FOR SALE OR HIRE.* 111

THE RAILWAY CARRIAGE COMPANY, OLDBURY, NEAR BIRMINGHAM.
MANUFACTURERS OF EVERY DESCRIPTION OF RAILWAY PLANT AND IRONWORK.
NEW AND SECOND-HAND RAILWAY WAGONS ALWAYS IN STOCK, FOR SALE OR HIRE. 112

RAILWAY WHEEL AND AXLE WORKS.—GEORGE WORSDELL AND CO., WARRINGTON, MANUFACTURERS of EVERY DESCRIPTION of HAMMERED IRON, TYRES, AXLES, &c. 113

WARRINGTON FORGE AND BAR IRON WORKS, WARRINGTON.
GEORGE WORSDELL AND CO., MANUFACTURERS OF EVERY DESCRIPTION OF MERCHANT BARS. 114

BURGIN AND WELLS, STEEL CONVERTERS AND REFINERS, MANUFACTURERS of RAILWAY CARRIAGE and WAGON SPRINGS, IMPROVED CAST-STEEL FILES, &c.
HOLLIS CROFT STEEL WORKS, SHEFFIELD. 115

JOHN BRYAN, GENERAL COMMISSION AGENT, 1, SANDHILL, NEWCASTLE-ON-TYNE.
CONTRACTS made for all kinds of MACHINERY, CAST and WROUGHT-IRON, RAILWAY BARS, ANCHORS, CHAINS, COALS, COKE, FIRE-BRICKS, &c.
All orders promptly shipped and forwarded. Prices and Lists of Freights or Carriage sent on application. 116

TO IRONMASTERS, MERCHANTS, CONTRACTORS, FOUNDERS, &c.—Messrs. DAUNT and MOFFAT, METAL BROKERS, 59, ST. VINCENT STREET, GLASGOW, OFFER THEIR SERVICES for the PURCHASE and SALE of PIG and MANUFACTURED IRON.
All orders carefully executed, and prompt shipments made. 117

THE PERMANENT WAY COMPANY.—Among other recent important inventions, the company beg to call particular attention to PRINCE'S PATENTS for CASTING RAILWAY CHAIRS; POLE'S PATENT IMPROVED FISH JOINT; PATENT HOLLOW SPLIT SPIKES; and Dr. BOUCHERIE'S IMPROVED PROCESS FOR PRESERVING SLEEPERS, FENCING, TELEGRAPH POSTS, &c., FROM DECAY. Every information may be had upon application to Charles May, F.R.S., the manager, or to 118
26, Great George-street, Westminster. WILLIAM HOWDEN, Sec.

STIRLING'S PATENT IRON.—The TOUGHENED CAST-IRON for GIRDERS, SHAFTINGS, ROLLS, PINIONS, RAILWAY WAGON WHEELS, ENGINE CYLINDERS, and for all purposes where a strong, dense iron is required, can be PROCURED of the following brands:—

Dundyvan.	Lloyd, Fosters, and Co.
Forth Company.	Russell's Hall, &c.
Horsley Company.	

RAILS OF (or surfaced with) PATENT HARDENED IRON, can be OBTAINED of the following makes:—

Parkgate.	Ebbw Vale.
Crookhay.	Dundyvan.
Bagnalls.	Monkland.
Blaina.	Hawks, Crawshay, and Co., &c.

By direct application to the several works. 119
Full information as to manufacture, quality, and terms for use of patent right, will be given by Mr. CHARLES MAY, 3, Great George-street, Westminster; and by Mr. W. P. MARSHALL, 54, Newhall-street, Birmingham.
Messrs. THORNTON AND SONS, of BRADFORD STREET, BIRMINGHAM, RECEIVE ORDERS for Mr. MORRIES STIRLING'S PATENT IRON RAILS, &c.

BESSEMER'S PATENT.—HIGHLY IMPORTANT TO IRONMASTERS.—R. and J. COUPE respectfully call the attention of ironmasters about to try Bessemer's patent process in the manufacture of iron to their IMPROVED BLAST ENGINES, to deliver a blast of from 4 lbs. to 20 lbs. per inch, as required. State quantity of cubic feet per minute required and the pressure, also the pressure of steam in boiler.
R. and J. Coupe's character for punctuality and dispatch, as now established, will be fully appreciated by those who may favour them with their orders, as there can be no doubt but that time will be a great object.
As a further inducement, R. and J. Coupe call attention to the fact, that they MANUFACTURE their IMPROVED HORIZONTAL HIGH-PRESSURE BLAST ENGINES, complete, for nearly as small a sum as required for a steam-engine alone of the same horse-power.—Apply to the above, Clayton Foundry, Wigan. 120

COALS FOR GAS AND COKE, of very superior quality, yielding 10,000 ft. of gas per ton, and producing COKE peculiarly adapted for locomotives, foundries, and smiths, MAY BE HAD in any quantity, direct from the collieries, by applying to The Brithdir Colliery and Coke Co., Newport, Monmouthshire. 121

SAFETY BLASTING CARTRIDGES.—JOHN WESTLAKE, HELSTON, CORNWALL, MANUFACTURER of superior WATERPROOF BLASTING CARTRIDGES, and CARTRIDGE CASES, for blasting operations in wet ground, which for CHEAPNESS, EFFICIENCY, and SAFETY, are unequalled.
The following is taken from a large number of testimonials from practical and experienced agents:—
"*Trumpet Consols Mines, July* 12, 1856.—Sir: We have examined and tried your Gutta Percha and India Rubber Cartridges, and beg to express our approbation of them for blasting in general; and we doubt not that if you render them at a reasonable price you will have an extensive demand for them; they only require a trial to determine their superiority, as they are the best that have been yet made for miners' use.—Richard Kendall; Richard Quentrall." 122

COPELAND'S PATENT SAFETY BLASTING CARTRIDGES. Established in 1849, and adopted by the principal mines in Devon and Cornwall. All others are imitations.
"Copeland's cartridges are the most simple, the most safe, and the most efficient that can be produced."—*Royal Cornwall Gazette.*
PRICES.—WATERPROOFED.

No. 1, equal to 6 ozs. of gunpowder,			30s.	per 100.
No. 2	" 8	"	36s.	"
No. 3	" 10	"	45s.	"
No. 4	" 16	"	67s.	"

No. 4 and larger sizes are well calculated for sinking shafts, &c. For dry ground, not waterproofed, 15 per cent. less than the above prices. 123
FOR COLLIERIES.—To disengage coal without much fracturing it, 18s. per 100 waterproofed, and 15s. per 100 not waterproofed.
Manufactory, Constantine, near Falmouth, Cornwall.

PATENT SAFETY FUSE.—The GREAT EXHIBITION PRIZE MEDAL was AWARDED to the MANUFACTURERS of the ORIGINAL SAFETY FUSE, BICKFORD, SMITH, DAVEY, and PRYOR, who beg to inform Merchants, Mine Agents, Railway Contractors, and all persons engaged in Blasting Operations, that, for the purpose of protecting the public in the use of a genuine article, the PATENT SAFETY FUSE *has now a thread wrought into its centre*, which, being patent right, infallibly *distinguishes it from all imitations*, and ensures the continuity of the gunpowder. 124
This Fuse is protected by a Second Patent, is manufactured by greatly improved machinery, and may be had of any length and size, and adapted to every climate.
Address,—BICKFORD, SMITH, DAVEY, and PRYOR, Tuckingmill, Cornwall.

SAFETY FUSE.—Messrs. WILLIAM BRUNTON and CO., PENHALLICK, near REDRUTH, CORNWALL, MANUFACTURERS OF FUSE, of every size and length, as exhibited in the Great Exhibition of 1851, and supplied to the Royal Arsenal at Woolwich, the Arctic Expedition, and every part of the globe.
Messrs. BRUNTON & CO. are at all times PREPARED to EXECUTE UNLIMITED ORDERS for SUPPLYING FUSE direct from their own MANUFACTORY, upon warrant that it will prove equal to, if not better, than any to be procured elsewhere. 125

DR. COLLYER'S AUSTRALIAN GOLD, TIN, AND COPPER MACHINERY.—Dr. COLLYER informs those who are interested in mining property that he has APPOINTED RANSOMES AND SIMS SOLE MANUFACTURERS in ENGLAND of his PATENT MACHINERY; and that they are prepared to SUPPLY the same on the following cash terms:—

Large size crusher, with shoes, capable of reducing from 10 to 12 tons of ore per day. Power required (say) eight horses	£120 0 0
Small size crusher, 3 to 5 tons per day. Power required (say) three horses	90 0 0
Gold separator, capable of washing alluvial earth, from 10 to 12 tons per day. Hand-power	50 0
Extra shoes, large size, £20; small ditto £10 each—capable of reducing	1000 tons.

(No part of this machinery exceeds 15 cwts.)
N.B. These machines are particularly adapted for the reduction of tin ores.—For further particulars, address Ransomes and Sims, Ipswich. 126

GOLD AND SILVER AMALGAMATING MACHINE—Messrs. SYMONDS, FELL, and CO.'S PATENT AMALGAMATOR MAY BE SEEN in DAILY OPERATION, effectually extracting gold and silver from the ore. They are prepared to PURCHASE any quantity of GOLD QUARTZ, or AURIFEROUS EARTHS; or UNDERTAKE the REDUCTION of ORES; or SUPPLY their NEW PATENT MACHINERY.
Mill Wall General Crushing and Grinding Mills, Smelting and Assay Works, Mill Wall, Poplar. 127

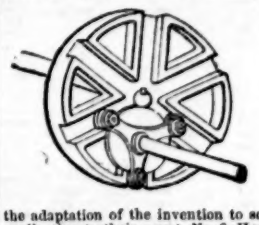
PUMPING MACHINERY.—LIFTING and FORCING PUMPS, PATENT CENTRIFUGAL and DOUBLE-ACTING PUMPS, DEEP WELL PUMPS, STEAM-ENGINES (portable and fixed), HYDRAULIC RAMS, WATER-WHEELS, and every description of MACHINERY, of the most approved construction, MANUFACTURED and SUPPLIED by GWYNNE and CO., Hydraulic and Mechanical Engineers, Essex Wharf, Strand, London. Catalogues on application. 128

MINING.—PORTABLE PUMPING AND WINDING ENGINES.—TO BE LET ON HIRE, or FOR SALE, several NEW and SECOND-HAND ENGINES, suitable for pumping, winding, or any other work, from 10-horse to 25-horse power.—Apply to Messrs. Medwin and Hall, engineers, Surrey Ironworks, Blackfriars-road, where they may be seen. 129

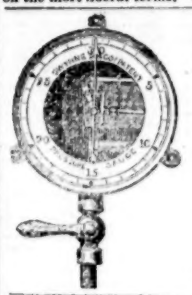
PATENT IMPROVED WIRE ROPE WORKS, MILLWALL, POPLAR.—A. J. HUTCHINGS, and CO., Sole Makers to the Lords of the Admiralty.—ROUND and FLAT ROPES, of every description, suitable for mining operations or other purposes, GALVANIZED or UNGALVANIZED, MANUFACTURED upon an IMPROVED PRINCIPLE, ensuring great pliability and durability. The superiority of these ropes over hempen ones, in point of strength, lightness, durability, and cost, is admitted by all who have tried them.
GUIDE ROPES, SIGNAL CORD, LIGHTNING CONDUCTORS, &c.
Offices, 117, Fenchurch-street, London. 130

TO MARINE ENGINEERS, SCREW SHIP COMPANIES, AND MACHINISTS GENERALLY.

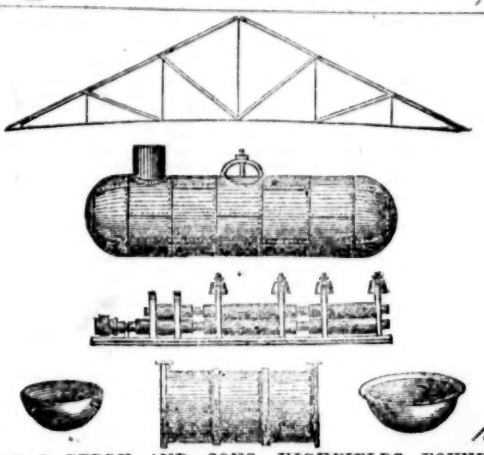
THE NEW PATENT MULTIPLE ROTATIVE GEARING.—This justly admired invention contrasts with the ordinary toothed gearing, for which it is proposed as a substitute, and possesses the pre-eminent advantages of COMPACTNESS, STRENGTH, DURABILITY, FREEDOM FROM NOISE and BACKLASH, UNIFORMITY and SMOOTHNESS of ACTION, REDUCED FRICTION, FACILITY for LUBRICATION and REPAIR, and virtually WITHOUT RISK of ACCIDENT, advantages unequalled in any other arrangement of gearing. It is proposed for all purposes where a change of speed is required, and is peculiarly applicable for screw propulsion.



The proprietors of the patent are prepared to GRANT DISTRICT and OTHER LICENSES for the manufacture of this gearing, or to ENTER INTO CONTRACTS for the adaptation of the invention to screw steam-vessels, or other machinery, upon application to their agent, No. 3, Hanover Chambers, Buckingham-street, Adelphi, where any further particulars may be obtained, and models and testimonials inspected.
The invention was honourably mentioned by the International Jury at the French Exhibition of 1855; and has been favourably noticed in the *Artisan* of June and July, 1855, and the *Mining Journal* of 8th December, 1855. Manufacturers treated with on the most liberal terms. Communications by letter post paid. 131



GWYNNE'S PRESSURE GAUGE.—These highly valuable instruments, from their EXTREME SIMPLICITY, UNERRING PRECISION OF ACTION, GREAT DURABILITY, and very MODERATE COST, are, without doubt, one of the prime desiderata of the day.
PRICES.—Divisions on enamel dials indicating to 12, 20, 30, 60, or 80 lbs. pressure on the square inch, 55s. each; to 140 lbs. ditto, 60s. each; to 200 and 300 lbs. ditto, 65s. each. Vacuum Gauges, 55s. each. Any other divisions on dial can be made to order.
EVERY INSTRUMENT WARRANTED.
Further particulars on application to Gwynne and Co., engineers, Essex Wharf, Strand, London. 132



THOMAS PERRY AND SONS, HIGHFIELDS FOUNDRY, BILSTON, MANUFACTURERS of CHILLED and GRAIN ROLLS, for ironworks, copper and zinc mills; and every description of FORGE MACHINERY, IRON ROOFS, STEAM-ENGINES, and STEAM-ENGINE BOILERS, TANKS, BRIDGES, SUGAR PANS, GAS and WATER PIPES, &c. STEAM CYLINDERS cast and bored up to 9 ft. diameter. CASTINGS made up to 25 tons weight.
PLANING and TURNING done to order. 133

JOSEPH CRAWHALL. EXHIBITION 1851. CLASS VI. 78.

HEMP AND WIRE ROPES OF EVERY DESCRIPTION.

JOSEPH CRAWHALL AND SONS, ST. ANN'S HEMP AND WIRE ROPE WORKS, NEWCASTLE-ON-TYNE. 134

IMPORTANT TO ENGINEERS, MILL OWNERS, AND ALL PARTIES USING MACHINERY.—AMERICAN INDIA RUBBER DRIVING BANDS or MACHINE BELTING, PACKING, SHEET, VALVES, WASHERS, and HOSE, at wholesale prices, from the importers, W. T. Hendry and Co., 38, Upper Thames-street, London.
PATENT FLEXIBLE STEAM PACKING, in rope or sheet, at 1s. 3d. per lb. 135

TO ENGINEERS, MACHINE MAKERS, AND OTHERS.—CHAS. MACINTOSH and CO., PATENTEES and MANUFACTURERS of the VULCANISED INDIA-RUBBER, in all degrees of elasticity, recommend this material as capable of SUSTAINING the ACTION of HOT or COLD WATER, GAS, STEAM, ACIDS, and GREASE. It is used extensively for valves in marine and land engines, railway buffers and springs, washers for pipe joints, hose, and tubing, also for gas holders, acid pumps, alkali cisterns, &c. Articles, moulded or otherwise, made to any size or figure.—Address, 3, Cannon-street West, London; and Cambridge-street, Manchester. 136

VULCANISED INDIA RUBBER MACHINE BANDING, does NOT STRETCH or SLIP on the pulleys, will last longer than leather at less cost, and will do more work than any other material. HOSE for BREWERIES, &c., warranted NOT TO IMPART the SLIGHTEST TASTE to any liquor passing through it, and to resist the effects of acid, grease, or any heat below 300°. Also, HOSE for LOCOMOTIVES, GARDENING, AGRICULTURAL, and other purposes. WASHERS for HOT or COLD WATER, or STEAM. The above articles kept in stock, others made to order. VALVES, RINGS, &c., cut from sheet at a minute's notice. Price lists on application.—Dodge, Bacon, and Co., 44, St. Paul's Churchyard, London. 137

NEW PATENT ACT, 1852.—Mr. CAMPIN, having advocated Patent Law Reform before the Government and Legislature, and in the pages of the *Mining Journal*, &c., is now READY to ADVISE and ASSIST INVENTORS in OBTAINING PATENTS, &c., under the NEW ACT.
The Circular of Information, gratis, on application to the Patent Office and Designs' Registry, 156, Strand. 138

NOTICE TO RAILWAY AND STEAM-BOAT TRAVELLERS.—ANDERTON'S HOTEL, 162, 164, and 165, FLEET STREET. BREAKFAST, with joint, 1s. 6d. BEDS, 10s. 6d. per week. DINNERS from Twelve to Eight o'clock; joint and vegetable, 1s. 6d.; with soup or fish, 2s. TURTLE SOUP and VENISON DAILY. TABLE D'HOTE at Half-past One and Half-past Five, at Two Shillings each. A night porter in attendance. 139

30,000 NERVOUS MIND AND HEAD SUFFERERS, from noblemen to mechanics, having tried all advertised and other remedies without a cure, have, during 18 years, been obliged to apply to the Rev. Dr. WILLIS MOSELEY, 18, Bloomsbury-street, Bedford-square, London, and 50 are not known to be uncured. Means of cure only to be paid for, and a relapse prevented for life. "Novel Observations," a pamphlet on nervousness, franked to any address if one stamp is sent; or, for 36, "Twelve Chapters on the only means of Curing Nervous or Mind Complaints."
"The best book on nervousness in our language."—Prof. Savage, Surgeon. 140

"Read ye that run, the awful truth, | A worm is in the bud of youth,
With which I charge my page; | And at the root of age."—Cowper.
Just published, New Edition, price 1s.; free by post for 14 stamps,
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NERVOUS DEBILITY; its Causes, Symptoms, and Cure. A complete Essay on Spermatorrhœa, and on a New, Safe, and Speedy Mode of Treatment, showing the serious consequences resulting from the dangerous remedies commonly employed in this disease. By Saml. La Mert, M.D., 37, Bedford-square, London. This work, emanating from a qualified member of the medical profession of many years' experience, is addressed to those persons who suffer from the various diseases acquired in early life.
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The SCIENCE OF LIFE; or, How to Ensure Moral and Physical Happiness.
Piper Brothers, 23, Paternoster-row; Hannay, 63, Oxford-street, London; or from the Author, who may be consulted at his residence from 11 till 2, and 6 till 8. 141

Holloway's Ointment and Pills invaluable and certain for the Cure of Scurvy.—Wm. Turner, a factory operative at Bailton, was severely afflicted with an inveterate scurvy, or skin disease, which seemed impossible to cure, as he tried various remedies without effect; however, he was at last induced to try Holloway's Ointment and Pills, and by the use of these invaluable medicines he has been completely cured, and not the least appearance of the disease remains on any part of his body; his health also is greatly improved.—Sold by all medicine vendors throughout the world; at Professor Holloway's establishments, 244, Strand, London, and 80, Maiden-lane, New York; by A. Stampa, Constantinople; A. Guidicy, Smyrna; and E. Muir, Malta. 142

THE MINING SHARE LIST.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
5120	Alfred Consols (copper), Phillack*	2l. 11s. 10d.	£13¼	13⅛ 13⅜	£15 0 0	£0 6 0—Aug. 4, 1856.
1024	Balleswidden (tin), St. Just	11¼	4⅛		12 5 0	0 5 0—Jan. 1, 1854.
4060	Bedford United (copper), Tavistock†	2l. 6s. 8d.	7	6⅛ 7	8 10 6	0 2 0—Aug. 28, 1856.
240	Boscean (tin), St. Just	20½	90		6 0 0	3 0 0—May 30, 1856.
200	Botallack (tin, copper), St. Just*	91¼	170	150 160	376 5 0	5 0 0—Aug., 1856.
100	Brightside and Froggatt Grove, Derbyshire	50	67½		3 0 0	3 0 0—Apr. 30, 1856.
100	Brynford Hall (lead), Flint†	20	120		13 0 0	5 0 0—July 31, 1856.
1000	Bryntail, Llanidloes, Montgomeryshire	7	4	4 4¼	0 5 0	0 5 0—July 1, 1856.
6000	Bwlch (silver-lead), Cardiganshire	3	4½		0 2 6	0 2 6—July 30, 1856.
1000	Carn Brea (copper, tin), Illogan	15	80		231 10 0	2 0 0—Dec. 15, 1855.
2048	Carnyorth (tin), St. Just	4½	5	7	0 15 0	0 3 0—June 16, 1856.
10000	Castle Slate Quarry, Dolwyddlan	1	1½		0 2 2	0 0 4—Feb. 8, 1855.
200	Cefn Cwm Brwyno (lead), Cardiganshire	33	75	115 120	3 0 0	3 0 0—Sept. 4, 1855.
256	Condurrow (copper, tin), Camborne	20	127½	130	68 0 0	2 0 0—July 1, 1856.
30000	Craven Moor (lead), Yorkshire	½	⅜		0 0 9	0 0 9—Feb. 28, 1856.
128	Cwmystwith (lead), Cardiganshire†	60	130	150	70 0 0	5 0 0—Aug. 28, 1856.
1024	Devon Great Consols (copper), Tavistock*	1	400	405	506 0 0	9 0 0—July 25, 1856.
672	Ding Dong (tin), Gulval†	32	38	40 42½	11 7 6	3 0 0—June 3, 1856.
179	Dolcoath (copper, tin), Camborne*	257¾	145	140	891 14 0	4 10 0—June 9, 1856.
12800	Drake Walls (tin, copper), Calstock	1l. 19s.	2		0 9 0	0 2 6—July 29, 1856.
300	East Daren (lead), Cardiganshire†	32	87	85 87½	12 0 0	2 0 0—July 10, 1856.
128	East Pool (tin, copper), Pool, Illogan*	24¼	245		260 0 0	5 0 0—Aug. 25, 1856.
1024	East Wheal Margaret (tin, copper)	5⅜	5⅛		0 5 0	0 5 0—Jan. 11, 1854.
1400	Eyam Mining Company (lead), Derbyshire	3⅛	25	25⅛	8 3 4	0 10 0—Aug. 7, 1856.
494	Fowey Consols (copper), Tywardreath	40	26		404 13 0	3 0 0—Feb. 12, 1856.
2240	Foxdale, Isle of Man*	7l. 10s. 8d.	36¼		50 7 8	1 0 0—Sept. 4, 1856.
320	Ditto (New Shares of 25l. each)*	25	36¼		11 4 0	1 0 0—Sept. 4, 1856.
4448	General Mining Co. for Ireland (cop., lead)	3	1¾		1 0 8	0 3 3—June 5, 1853.
1024	Gonamena (copper), St. Cleer	13¼	27	26 26½	0 7 6	0 7 6—Dec. 21, 1852.
13750	Great Polgooth (tin), St. Austell	4¼	1		0 10 0	0 4 0—Oct. 12, 1852.
6000	Great South Tolgus	2⅜	9	8 9½	0 2 6	0 2 6—June 27, 1855.
20866	Great Wheal Vor (tin, copper), Helston	5	3		0 5 0	0 5 0—June 20, 1855.
119	Great Work (tin), Germoe	100	160		206 10 0	10 0 0—Aug. 26, 1856.
1024	Herodsfoot (lead), near Liskeard	8½	2⅛		2 12 6	0 7 6—Apr. 18, 1854.
6000	Hingston Down Consols (copper), Calstock	3⅜	3¼		2 13 6	0 3 6—July 26, 1856.
2000	Holyford (copper), near Tipperary	11	8½	8½ 9	3 17 6	0 5 0—July 30, 1856.
76	Jamaica (lead), Mold, Flintshire	3l. 13s. 6d.	—		380 0 0	5 0 0—Mar. 10, 1851.
20	Laxey Mining Company, Isle of Man	100	1000		1320 0 0	50 0 0—Jan. 3, 1856.
160	Levant (copper, tin), St. Just	2½	105		1054 0 0	2 0 0—Aug. 12, 1856.
400	Lisburne (lead), Cardiganshire, Wales	18¾	122½		223 15 0	5 0 0—June 7, 1855.
6000	Marke Valley (copper), Caradon	4l. 10s. 6d.	4		0 5 6	0 3 0—Sept. 7, 1855.
5000	Mendip Hills (lead), Somerset	3¾	2⅜		1 2 6	0 5 0—May 21, 1856.
5000	Merllyn (lead), Flint	3	⅛		1 11 0	0 2 6—June 22, 1853.
20000	Mining Co. of Ireland (copper, lead, coal)	7	14½	14¼	11 14 6	0 7 0—July 3, 1856.
5000	Nanteos and Penrhiw	1⅜	1⅜		0 1 6	0 1 6—Apr. 30, 1855.
7500	Nantlle Vale (slate), Llanllyfin	1	1		0 3 9	0 1 3—Nov. 29, 1854.
6400	Nether Hearth, Westmoreland	2s.	1¼		0 2 0	0 1 0—May 21, 1856.
470	Newtonards Mining Company, Co. Down†	50	35		47 0 0	1 0 0—July 15, 1856.
200	North Pool (copper, tin), Pool	22½	70		324 0 0	2 0 0—Dec. 26, 1854.
140	North Roskear (copper), Camborne	10	75	85	249 10 0	4 0 0—Sept. 26, 1853.
6000	North Wheal Basset (copper, tin), Illogan*	nil.	33½	35¾ 36¼	9 14 0	0 12 6—Aug. 20, 1856.
6400	Par Consols (copper), St. Blazey	1⅛	19⅛		25 16 0	1 0 0—July 1, 1856.
500	Peak United (lead), North Derbyshire	7¾	9⅜		4 10 0	0 10 0—Apr. 12, 1856.
200	Phœnix (copper, tin), Linkinghorne	30	475		184 10 0	37 10 0—May 7, 1856.
1000	Polberro (tin), St. Agnes (Preferential)	15	—		13 3 10	0 10 0—June 28, 1856.
560	Providence Mines (tin), Uny Lelant†	20l. 13s. 2d.	61	60 61	48 4 6	4 0 0—Aug. 20, 1856.
2500	Rhoswydol and Bacheiddon (lead)	11¼	11½		0 7 0	0 3 0—June 18, 1856.
512	Rosewarne United (copper, tin), Gwinear*	12	65½	65	25 10 0	2 0 0—Aug. 11, 1856.
12000	Sortridge Consols (cop.), Whitchurch, Devon	6s.	2⅛	2⅛ 2¾	0 5 0	0 2 6—July 30, 1856.
256	South Caradon (copper), St. Cleer*	2½	290	285 295	412 0 0	8 0 0—May 27, 1856.
128	South Crinnis (copper), St. Austell	19	375		60 0 0	20 0 0—June 18, 1855.
9000	South Tamar (silver-lead), Beerferris†	1l. 6s. 6d.	3¼	⅜ ⅛	3 6 0	0 5 0—Apr. 10, 1856.
256	South Tolgus (copper), Redruth, Cornwall	16	130	140 150	69 0 0	4 0 0—May 27, 1853.
496	South Wheal Frances (cop.), Illogan*	18l. 18s. 9d.	365	365 367½	214 5 0	8 0 0—Sept. 1, 1856.
1024	Spearne Consols (tin), St. Just, Cornwall	3	4	4½	8 8 6	0 2 6—Dec. 10, 1853.
280	Spearne Moor (copper), St. Just†	23l. 7s. 8d.	—		3 15 0	0 15 0—Mar. 14, 1856.
1024	St. Aubyn and Grylls (cop., tin), Breage	3l. 17s. 8½d.	3½		0 17 6	0 7 6—April 1, 1852.
94	St. Ives Consols (tin), St. Ives	80	100		888 0 0	8 0 0—Feb. 21, 1854.
9600	Tamar Consols (silver-lead), Beeralston	4½	1	1¼ 1⅜	4 13 6	0 2 6—Feb. 7, 1856.
6000	Tincroft (copper, tin), near Pool, Illogan	9	3⅜	4	7 8 6	0 5 0—May 28, 1856.
2048	Trehane (silver-lead), Menheniot	⅜	¾		8 11 3	0 5 0—Dec. 29, 1855.
572	Trelyon Consols (tin), St. Ives	11½	6		1 15 0	1 0 0—Feb. 21, 1854.
96	Tresavean (copper), Gwennap, Cornwall	32½	110		4677 15 0	5 0 0—June 4, 1855.
120	Trethellan (copper), Gwennap, Cornwall	10½	21		403 13 6	2 10 0—Apr. 29, 1851.
4000	Tretoil (copper, tin), Bodmin	12s.	3½		0 5 0	0 5 0—July 8, 1856.
4096	Trewetha (silver-lead), Menheniot, Cornwall	2	3½	3⅜	1 3 0	0 3 0—June 16, 1856.
100	Trumpet Consols (tin), near Helston	95	90		55 0 0	5 0 0—Dec. 20, 1854.
400	United Mines (copper), Gwennap	40	92½	150	61 5 0	2 0 0—Feb. 12, 1856.
20000	Vale of Towy (ld.), Llangunnor, Carmarthen	⅜	1¼		0 3 3	0 1 3—May 8, 1856.
1024	Wellington (copper, tin), Perranuthnoe	8¼	½		2 5 0	0 2 6—Jan. 12, 1855.
10500	Welsh Potosi (silver-lead), Talybont, Card.	5	6		1 0 0	0 5 0—July 16, 1855.
2000	Ditto (New Shares of 5l. each)	3	3½		0 12 0	0 3 0—July 16, 1855.
6000	West Basset (copper), Illogan*	1⅛	29	30 31	8 8 6	0 13 6—July 16, 1856.
256	West Caradon (copper), Liskeard	20	130		274 5 0	5 0 0—Aug. 22, 1855.
256	West Damsel (copper), Gwennap	£10 7	80	85	12 0 0	2 0 0—May 14, 1855.
1024	West Providence (tin), St. Erth†	5	19½	19½ 20	26 15 0	0 15 0—July 3, 1856.
400	West Wheal Seton (copper), Camborne*	38½	225	250	46 10 0	6 0 0—Aug. 11, 1856.
1328	Wheal Arthur (copper), Calstock	7	6		6 10 0	0 10 0—Oct. 25, 1855.
240	Wheal Bal (tin), St. Just	6½	—		2 0 0	1 0 0—Nov. 14, 1855.
512	Wheal Basset (copper), Illogan*	5⅜	285	300	415 10 0	10 0 0—Aug. 5, 1856.
256	Wheal Buller (copper), Redruth*	5	290	300	801 5 0	15 0 0—July 15, 1856.
1024	Wheal Charlotte, Perranuthnoe	3¾	6⅛		1 10 0	0 10 0—Sept. 9, 1855.
250	Wheal Clifford (copper), Gwennap	—	300		12 0 0	3 0 0—June 17, 1856.
5700	Wheal Exmouth and Adams United	4l. 14s.	8¼		2 2 0	0 3 0—Aug. 20, 1856.
5000	Wheal Fortescue, Bodmin	nil.	1		0 2 4	0 1 6—Jan. 14, 1856.
128	Wheal Friendship (copper), Devon	50	115	105	2375 10 0	8 0 0—May 10, 1854.
512	Wheal Jane (silver-lead), Kea	3½	20		4 10 0	1 0 0—Oct. 25, 1853.
1024	Wheal Kitty (tin), Uny Lelant	£1 7 2	10½	10½ 11⅛	2 0 0	0 10 0—June 18, 1856.
430	Wheal Lovel (tin), Wendron	33	20		30 0 0	2 0 0—Aug. 9, 1854.
448	Wheal Margaret (tin), Uny Lelant†	19¾	37	42½	67 0 0	2 0 0—Aug. 26, 1856.
1024	Wheal Mary Ann (lead), Menheniot†	3⅜	35	37 38	19 12 6	2 0 0—June 17, 1856.
80	Wheal Owles, St. Just, Cornwall	70	260		191 8 0	6 5 0—Aug. 15, 1856.
240	Wheal Reeth (tin), Uny Lelant	24¼	11½		40 10 0	3 0 0—Aug. 23, 1852.
198	Wheal Seton (tin, copper), Camborne*	107	180		269 10 0	3 0 0—Aug. 11, 1856.
520	Wheal Trelawny (silver-lead), Liskeard	8⅜	23	22½	50 10 0	1 0 0—Apr. 28, 1856.
1024	Wheal Tremayne (tin, copper), Gwinear	9⅜	4		10 2 6	0 7 6—Jan. 11, 1854.
4096	Wheal Wrey (lead), St. Ive†	1l. 9s.	8¼	8 8¼	1 17 0	0 7 0—Aug. 19, 1856.
5000	Wicklow (copper), Wicklow	5	29½	29	25 13 0	0 10 0—July 10, 1856.

[* Dividends paid every two months. † Dividends paid every three months.]

FOREIGN MINES.

Shares.	Mines.	Paid.	Last Price.	Present.	Dividends per Share.	Last Paid.
5000	Alten Mining Company (copper), Norway	£14½	3	3	4 5 0	0 15 0—Nov. 21, 1853.
51886	Baden, Grand Duchy of	1	¼		0 1 0	0 1 0—Nov. 6, 1852.
10000	Brazilian Imperial (gold), Brazil	26½	3	2½ 3	34 17 6	0 10 0—Dec. 1844.
2464	Burra Burra (copper), South Australia	5	125		160 0 0	5 0 0—Dec. 13, 1855.
12000	Cobre Copper Company (copper), Cuba	40	54	55 58	81 12 0	3 0 0—July 29, 1856.
100000	Colonial Gold, Australia	1	⅜		0 1 6	0 1 6—Mar. 28, 1854.
10000	Copiapo Mining Company (copper), Chili	16	18	16 18	5 8 0	0 10 0—May 9, 1856.
20000	General Min. Assoc. (iron, coal), Nova Scotia	20	15	14 15	9 10 0	0 10 0—June 26, 1856.
15000	Linares (lead), Pozo Ancho, Spain	3	8	7 8	3 10 6	0 5 0—June 26, 1856.
10000	Lusitanian (of Portugal)	1¼	1½	1 1⅛	0 2 6	0 2 6—Sept. 19, 1855.
103815	Mariquita and New Granada	1	⅜	⅛ ⅜	0 2 0	0 1 0—July 27, 1853.
36000	Obernhof (lead), Nassau	1	⅛		0 1 0	0 1 0—June 29, 1853.
25000	Peninsular Mining Company	¾	⅜	⅛ ⅜	0 2 6	0 2 6—Sept. 29, 1855.
10000	Pontgibaud (silver-lead), France	20	11	9 11	1 0 0	1 0 0—June 26, 1855.
7000	Royal Santiago (copper), Cuba	12¾	2¾	2¼ 2¾	33 0 0	1 5 0—July 12, 1848.
104000	San Fernando (silver-lead), Linares	1	3s. 6d.		0 1 9	0 0 7—June 30, 1854.
11000	St. John del Rey (gold), Brazil	15	22	21 23	33 7 6	1 10 0—June 13, 1856.
43174	United Mexican (silver), Mexico ...Av.	28¼	4¼	3¾ 4¼	1 16 6	0 4 0—Feb. 14, 1853.
70000	Waller (gold), Goochland Co., Virginia	1	⅛		0 0 9	0 0 9—July 2, 1855.
30000	Mexican and South American Smelting Co.	9	4¾	4¼ 4¾	6 15 0	0 7 6—Dec. 12, 1855.
88676	North British Australasian	1	⅜	⅜ ⅜	0 1 8	0 1 0—Apr. 17, 1855.

NON-DIVIDEND FOREIGN MINES.

Shares.		Paid.	Last Price.	Present.
20000	Acadian Charcoal Iron (Limited)	2	—	2 2¼
75000	Adelaide Land and Gold Com.	2	¾	⅛ ⅜
35000	Almaden (silver-lead), Spain	2	1¾	
50000	Chancellorsville Freehold	1	8s. 6d.	¼ ⅜
54800	Cologne Mining Company	1	—	
124400	Fort Bowen, New Granada	1¼	3s.	⅜
20000	Iberian (silver-lead), Spain	½	⅛	⅜
2309	Kinzigthal Min. Ass., Germany	4	1½	
80000	Mount Carbon (coal), Virginia	1	1s.	1s.
100000	Wheal Jamaica (copper)	12s.	⅜	⅜
75000	Wildberg (sil.-lead, copper)	2	1½	
100000	Worthing (cop.), Adelaide	12s.	⅜	

MINES WHICH HAVE SOLD ORES.

Shares.		Paid.	Last Price.	Present.
6000	Abbey Consols (lead), Cardigan	9s.	1¼	1 1⅛
1024	Aberdovey (lead), Merioneth	2¼	—	
6000	Altgoed Consols Slate Quarry	2⅛	⅛	
940	Balnoon Con. (tin), Uny Lelant	3⅜	4⅛	4 4⅛
12000	Ballygoneen (lead), Wicklow	1	⅜	
4000	Ballyvirgin, Co. Clare	£1 14	3½	
10000	Bampfylde (copper), Devon	⅛	⅜	⅜
2000	Basset Grace United (cop.), Kea	2	2	
4000	Bedford Consols	7s.	¼	⅜
7000	Beeralston United, Devon	⅛	¼	
508	Bell and Lanarth, Gwennap	11	2	
2200	Benderg (Limited)	¼	—	¼
6000	Bodewl, South Wales	£1 7	¼	
1000	Boiling Well (copper)	13	8	7 8
4096	Boringdon Consols, Plympton	4¼	⅛	
4000	Bronfloyd (lead), Wales	4	¾	2 2¼
6000	Buckland Con. (cop.), Buckland	1s.	¼	¼
420	Budnick Consols (tin), Perran	2½	3	
6400	Buller and Basset United	1¾	4½	4 4¼
812	Butterdon (lead)	£6 8	3	
5000	Cae-Cynon, Cardiganshire	10s. 6d.	⅛	
3384	Calstock Consols (copper)	4½	2½	
2704	Calstock United (tin and cop.)	£6 2	⅜	
1900	Camborne Consols	13	4¾	4
64	Cambrian (gold)	62½	—	
6000	Camdwr Mawr (lead, copper)	£1 2	—	
32	Camel Quarry	305	280	
1024	Caradon Consols, St. Cleer	10	8½	7¾ 8
229	Cargoll, Newlyn	25	29	
26000	Carnarvonshire Slate	1	1¼	
5000	Carnewas (lead, cop.), Mawgan	¼	⅜	½
1055	Carvannall (copper), Gwennap	11	7½	
6400	Carvath United, St. Austell	2¼	3¼	2¼ 2½
8000	Catherine and Jane Consols	⅛	⅜	
6000	Caylan, North Wales	£2 3	1⅛	
6000	Cefn Gwyn (sil.-ld.), Cardigan	1	1	
2000	Clara (lead), Cardiganshire	£1 8	1⅛	
1024	Clijah & Wentworth (tin, cop.)	17½	13	10 11
8000	Clowance Wood, Gwinear	8s.	⅜	
2000	Coed Mawr Pool (ld.), Llanrwst	6⅜	5	
1000	Collacombe (copper)	10	50	40 45
15000	Connemara (sil.-lead), Galway	4	⅜	
2510	Cook's Kitchen, Illogan	£15 18 9	2	
20000	Coosheen (copper), Cork	1	¾	
256	Copper Hill	33	110	
1055	Craddock Moor (cop.), St Cleer	8	37	45 47½
30000	Craignuir (cobalt and nickel)	1s. 6d.	⅛	
12800	Cross-gill and Tees Head	⅛	⅜	½
6400	Crow Hill, St. Stephen's	1⅜	⅜	
9000	Cubert (silver-lead), Cornwall	2⅜	⅜	
10000	Cwm Daren (ld.), Cardiganshire	14s.	⅜	
6700	Cwmdyle Rock and Green Lake	3⅛	⅜	
1000	Cwm Erfin (lead) Cardigansh.	8	2	1¼
6000	Cwm Sebon	£2 11 6	1½	1½
3000	Dalrhiew (cop., lead), Brecon	2¾	—	
1000	Daren (sil.-lead), Cardiganshire	6	2¼	
1400	Derwent (sil.-lead), Durham	60	—	
4096	Devon & Cornwall United (cop.)	£4 0 9	4½	4¼
3907	Devon and Courtenay (copper)	⅜	⅛	
2695	Devon Burra Burra (copper)	£4 10	2⅜	
10000	Devon Tin Mines, Dartmoor	1⅛	—	
4366	Devon Wheal Buller	£1 10 6	⅜	⅜
14000	Dhurode (copper), Ireland	1	⅛	
853	Duke of Cornwall, Lostwithiel	£21 19	19	16 16½
15000	Dunsley Wheal Phœnix	1	1	
3000	Dyfngwm (lead), Wales	£11 11 6	11	
256	Eaglebrook, Llanphangel, Card.	40	21	18 19
4096	East Alfred Consols	£1 1 6	⅛	
100	E. Balleswidden (tin), Sancreed	7	—	
256	East Basset (copper), Redruth	47	42	40 40½
4200	East Birch Tor, Dartmoor	5	5	
5000	East Black Craig, Kirkcudbright	½	⅛	
1024	East Buller (copper), Redruth	12	4⅛	
1024	East Garras (lead), St. Clement	⅛	1	⅜ ⅜
1024	East Goldscope (copper)	⅜	3	
4000	E. Gunnis Lake & S. Bedf. (cop.)	3⅛	1⅜	
5000	East Hender (copper), Crowan	½	1⅛	
1000	E. Rosewarne (cop., tin), Crowan	2s.		
9000	East Tamar (sil.-ld.), Beerferris	£2 14 6	⅜	⅜
256	East Tolgus (copper), Redruth	31	75	50
2048	East Wheal George, Walkhamp.	3¼	—	
10000	East Wheal Robert	⅜	⅛	
1035	East Wheal Rose (silver-lead)	31½	20	18 20
4000	East Wheal Russell, Tavistock	£4 3	1¼	
2938	East Wheal Vor (tin)	3⅛	⅜	
4096	East Wheal Wrey	9s. 6d.	⅜	
1280	Esgair Lle (Limited)	10	10	10½
1440	Exmouth Consols (copper)	¾	1⅜	
5000	Fee Donald (lead, antimony)	5s. 6d.	⅜	
4000	Fox Tor (tin), Altarnun	1	⅜	
5000	Frank Mills, Devon	2	4	3 3¼
5000	Gallt-y-Ffrith-Rhedyn (Limited)	3	3	
5000	Garreg (lead), Flint	£2 9 6	⅛	
4000	Gawton (copper), Tavistock	3⅛	1⅛	⅜ 1
6000	Gellirheiron (sil.-ld.), Cardigan	1	⅜	
128	Gernick	100	40	
1024	Gilmar (tin), St. Erth	6⅜	2	
2000	Goginan (lead), Cardiganshire	8	4	
6000	Gorn (lead), Llanidloes	2s.	1	
243	Grambler and St. Aubyn (cop.)	109½	72½	
900	Great Beam (tin), St. Austell	20	9	
4000	Great Cowarch, Merioneth	4⅜	1	
30000	Great Crinnis (cop.), St. Austell	1	⅜	
4000	Great Dowgas	3⅛	3¼	
15372	Great Hewas United	£1 17	⅜	⅛ ⅜
14956	Great Onslow Con., Camelford	1	⅛	
1024	Gt. Sheba Con., Stoke Climsland	23	2	
14000	Gt. Tregune Consols, Altarnun	1	2⅛	
10000	Great Treveddoe	2	2¼	
5120	Great Wheal Alfred, Phillack	£9 18 1	4¾	5 5⅛
5120	Great Wheal Baddern (tin)	£3 8 6	⅜	
6000	Gt. Wh. Busy (cop. & tin), Kenwyn	2⅛	2¾	
1024	Great Wheal Fortune, Breage	£18 15 6	6½	
16000	Grey Mare (iron, &c.), Cornwall	2s. 9d.	⅜	
20480	Gunnis Lake	1⅛	1	1
5000	Gwrda (lead), Wales	¼	1	
9600	Gwydyr Park Consols, Llanrwst	7s.	¼	
512	Halamanning and Croft Gothal	104½	11	
8192	Hawkmoor (tin, cop.), Calstock	£1 6	¾	
2048	Helvellyn Consols (copper)	1	1	
4096	Hemerdon Consols	£1 5 6	⅜	
100	Herward United (lead), Flint	30	40	
10000	Hill Bridge Consols	1	1⅛	
5000	Holmbush (ld., cop.), Callington	4½	1⅜	1⅛
6144	Inney Consols	1⅜	1⅜	
12000	Ivybridge (silver-lead)	1	¾	
2048	Kea Tremayne (tin)	nil	—	
5000	Kelly Bray (ld., cop.), Callington	8⅜	2	
2048	Kenneggy (copper), Breage	6s. 7d.	⅜	
6000	Keswick (lead), Portinscale	£4 9 6	⅜	
6000	Lady Bertha (copper)	5s. 6d.	⅜	
1024	Leeds & St. Aubyn (tin, cop.)	£10 7 9	4	3
1024	Lelant Consols (tin)	25	6½	
5000	Lewis (tin, copper), St. Erth	£4 18	2⅛	
1536	Llwynmalees (Limited)	10	10	11¼
4000	Loveden United, Cardiganshire	1⅛	1	
20000	Ludgvan Lease (tin), St. Ives	⅜	¼	
1024	Ludgvan Wheal Margaret (tin)	1	1⅛	
5056	Lydford Consols (lead), Devon	£2 3 6	⅛	
4096	Mainstone (lead), Salop	1½	⅛	
6400	Michell (lead), Flint	⅜	⅛	
1024	Mill Pool (tin, cop.), St. Hilary	9⅜	3	3
7500	Mixon Great Con. (cop.), Leek	£1 19 2	1	
10000	Molland (cop.), South Moulton	⅛	⅛	
4403	Mount's Bay Consols, Marazion	2⅜	¼	
4096	Mount Tiack (tin, cop.), Lelant	1	5	
64	Nant-ar-Nelle, Llandovery	31	23	20 21
7500	Nantlle Vale (new shares)	¼	⅜	
1500	Nant-y-Car (cop.), nr. Rhayader	£4 7	4¼	
2400	New Machno Slate and Slab Co.	10	10	
1024	North Buller (cop.), Redruth	£11 2	3⅛	
1024	North Ding Dong (tin), Madron	1	3⅜	
2000	North Downs (cop.), Redruth	1⅛	⅜	
2500	North Frances (cop.), Illogan	5	10½	
1366	North Grambler, Redruth	⅛	1⅛	
2000	North Levant (tin, cop.), St. Just	3⅜	5¼	5
1024	North Rosewarne, Gwinear	⅛	⅛	
14000	North Staffordshire Consols	£1 2	1	
4096	North Tamar (sil.-lead), Lezant	1⅛	1⅛	
10000	North Towy and Cystanog	6s. 6d.	¼	
1024	North Wheal Busy	£5 6 8	9	
1128	North Wheal Crofty (cop.)	£1 18 10	4	3⅛
1024	No. Wh. Gilbert (cop.), St. Erth	1¼	3½	
1024	N. Wh. Robert, Sampford Spiney	14	31	
4240	North Wheal Trelawny	2¼	⅜	¾
2400	N. Wh. Unity (cop., tin), Gwin.	1	1¼	
4096	N. Wheal Wrey Consols, St. Ive	¼	1½	1 1⅛
4096	Okel Tor (lead), Calstock	3⅛	2	
512	Old Tolgus United (cop.), Redr.	15⅜	55	55
256	Old Wheal Basset, Illogan	4	2	
4000	Oola (sil.-lead, cop.), Limerick	14s. 6d.	⅛	
2500	Orsedd (lead), Flint	2⅜	⅛	
10000	Pedn-an-drea United (tin)	£2 6	1⅛	1⅛ 1⅜
37720	Pembroke & East Crinnis (cop.)	£1 3 6	¾	
5000	Penhorse Consols, St. Enoder	1⅜	1⅜	
6000	Pennance Consols	1⅛	—	
4689	Penquean, St. Breock	1	⅜	
640	Pen-y-Gelli (lead), Flintshire	6	2½	
6495	Perran Consols, Perranuthnoe	2	1⅛	
1160	Perran St. George (copper, tin)	21½	18	
2600	Polgear & Lanearrow (cop., tin)	£2 3	⅛	
2048	Ponterwyd (lead), Cardigan	2⅜	1	
2400	Porkellis United (tin), Wendron	9	11	10
6000	Prince Albert Co. (tin), St. Agn.	1	1	
4096	Queen of Dart, Devonshire	⅛	1¼	
10000	Rheidol United Mine	£1 5 6	1¼	
4000	Ritton Castle (lead)	£1 6	—	1¼
17323	Rorrington (lead), Chirbury	8s. 6d.	6d.	
1024	Rosewarne and Herland United	2⅛	3	3⅛
5000	Round Hill (silver-lead), Salop	1¾	⅛	
5250	Silver Brook, Ashburton	£2 3 6	⅜	
4000	Sithney Wheal Buller (tin)	3	3¼	
12000	Sortridge & Bedford, Tavistock	9s. 10d.	3s.	
6400	South Buller and W. Penstruthal	⅛	2⅛	
2000	South Carn Brea (cop.), Illogan	14	10	10½
6144	S. Condurrow (tin, cop.), Camb.	11s. 6d.	¾	
4000	South Crenver (copper)	£4 8 6	1⅜	
6000	South Cuddra	4s. 6d.	1¼	
256	South Garras, St. Clement	26	95	
1024	South Providence (tin), Sithney	£3 7	7	
2048	South Wales Consols	£2 8 4	3	
1105	So. Wh. Crofty (cop.), Illogan	£1 18 10	5½	
1024	So. Wh. Ellen (cop.), St. Agnes	£3 15 9	8	8½
4096	South Wheal Mary Ann	1s.	¼	
5208	St. Austell Consols	£2 14	1⅛	
2500	St. Columb United	1	6d.	
20000	St. Day United (tin and copper)	2	1¼	
20000	St. Dennis Consols	16s. 6d.	—	
920	Stray Park and Camborne Vean	10⅜	5¼	
30000	St. Hilary Wheal Friendship	1	1	
1800	Swanpool, Budock	8	2	
10000	Taliesin (sil.-ld.), Cardiganshire	2⅛	—	
4944	Tavy Con. (cop.), near Tavistock	£2 14	⅛	
6400	Tees Side (lead), Cumberland	1⅛	⅜	¼
1024	Trebarvah, Perranuthnoe	4	⅜	
600	Tregardock (lead), St. Teath	6¾	⅜	
5000	Treleigh Consols (cop.), Redruth	6	⅛	¼
10000	Treloggan, St. Colomb Minor	1¼	1⅛	
5000	Treloweth (copper), St. Erth	£3 14	6	
2000	Trenow Consols, Perranuthnoe	£7 4 2	1	
10000	Trevalga (slate), Boscastle	1	—	
2048	Trevelyan (tin, copper)	6	6	6
1014	Trevenen (tin), Wendron	12	3¾	
1024	Trevoole, Crowan, Cornwall	4	4	
16	Trinity (copper, lead)	250	250	
6400	Tyne Head (silver-lead, copper)	¼	⅜	
4000	Tyn-y-Worglodd (slate), Carna.	5	4½	
10000	Tyn-y-berth (slate), Talyllyn	1⅜	⅜	
6000	Union (tin), Roche & Luxillion	1½	1⅜	1½
5085	United Mines, Tavistock	⅛	3	
512	Wendron Con. (tin), Wendron	£23 7 8	40	
2000	West Aberffwyd, Cardiganshire	4s.	⅛	
1024	West Alfred (cop.), Phillack	£27 18 5	20½	18
4096	West Collacombe (copper)	£2 2	⅛	
3000	West Crinnis, St. Austell	3⅜	3½	
6400	West Fowey Consols (tin, cop.)	£6 0 8	6½	
25000	West Par Con. (cop.), St. Blazey	1	⅜	
6000	West Polberro, St. Agnes	£1 18	2	
1024	West Rosewarne United	2	4½	4 4
12000	West Sortridge, Whitchurch	4s. 6d.	1s. 6d.	
1056	West Stray Park, Camborne	2	8½	8 8
128	West Wheal Bolton	50	55	
512	West Wheal Frances, Illogan	23	15	20
10000	West Wheal Jane, Kea	1⅜	—	
500	West Wheal Towan (cop., tin)	36	3	
128	W. Wh. Virgin (tin), Sancreed	2	2⅛	
6000	Wheal Agar (copper), Illogan	⅛	2¼	
256	Wheal Betsy (tin), St. Agnes	14⅜	—	
12000	Wheal Bray (copper), Altarnun	1	¼	
539	Wheal Carne (tin), St. Just	9⅜	—	
1024	Wheal Constance (silver-lead)	4	4⅛	
4096	Wheal Crebor (cop.), Tavistock	4	⅜	
1024	Wheal Cupid (copper), Redruth	12	12	
4096	Wheal Edward (cop.), Calstock	5⅛	2¼	1¼
1024	Wheal Ellen (cop.), St. Agnes	£1 12	4	
4000	Wh. Emma (cop.), Buckfastleigh	¾	9	
1070	Wheal Enys (tin), Wendron	£13 15 6	10	
8000	Wh. Fortitude, Buckland Mon.	⅜	—	
720	Wheal Franco, near Tavistock	20½	9	
1536	Wheal Gill	10	⅛	
6000	Wheal Grenville	3⅜	1⅛	1
5000	Wheal Guskus (tin, copper)	£2 9	⅜	
5120	Wheal Harriett, Camborne	1⅜	⅜	
3000	Wheal Helen (tin), Breage	1½	⅜	
1000	Wheal Hender, Crowan	£2 4 6	4⅛	3⅛
5000	Wheal Kitty (tin), St. Agnes	4½	4¼	
6000	Wh. Langford (cp., sil.-ld), Cal.	£1 6 6	⅛	
2000	Wheal Langston (mang., cop.)	⅛	⅜	
4800	Wheal Ludcott	17s.	1⅜	1¼
512	Wheal Margery (tin), St. Ives	16½	32	
512	Wheal Mary Ann, Perran	2	5	
3400	Wh. Mary Great Consols (cop.)	6⅛	1¼	
3000	Wh. Maudlin (cop.), Lanivery	3	2¾	2¾
512	Wheal Montague (tin)	6⅜	—	
300	Wheal Morgan, Llandovery	5	19½	
5000	Wheal Nelson (cop., tin), Cam.	2½	1⅛	1½
128	Wheal Polmear, St. Austell	30	39	
2048	Wheal Robins (tin), Liskeard	3	⅜	
4000	Wheal Russell (cop.), Tavistock	2⅛	⅜	
1024	Wheal Sidney, Plympton	7	—	
6000	Wheal Tehidy (cop.), Illogan	2⅜	2¾	1¾
512	Wheal Trefusis (cop.), Gwenn.	20⅜	10½	
1044	Wheal Trenwith (copper, tin)	£9 9 6	5½	
3600	Wheal Trevena (tin), Breage	5	5⅛	
8448	Wheal Trewane (silver-lead)	1¼	—	
3000	Wheal Tristrem, St. Austell	4¼	—	
3102	Wh. Unity (cop., tin), Gwinear	8	2	
1024	Wheal Uny (tin, cop.), Redruth	23⅜	4	4 4
1024	Wheal Venton (silv.-lead), Lisk.	£6 13	3¼	
4096	Wh. Zion (cop., lead), Calstock	£4 13 6	⅛	⅜
6000	Whitchurch Consols	1¼	⅜	
6400	Whitford (lead), Flint	6s.	⅜	
5000	Willow Bank (lead), Cardigan	¾	⅜	¾
4096	Wood (lead), Beerferris	£1 3 6	1¼	
10000	Wrysgan (slate), Festiniog	1	—	
5000	Wrysgan (Preference)	1	—	
4096	Yeoland Consols (tin, copper)	4¾	¾	

MINES NOT HAVING SOLD ORES.

Shares.		Paid.	Price.
6000	Beaufort Consols	1s.	¼
6000	Bolenowe	£1 4 6	⅜
1180	Bridford Consols	£7 1	1
4000	Brookwood	⅛	2⅜
6000	Bwlchstellan (lead)	1	1
2048	Carew United	2	2
6000	Castell	6s. 6d.	¼
12800	Clew Bay, Ireland	1	1
256	Clowance Mines	15⅜	75
5000	Devon United	1	⅛
30000	Drewsteignton	⅛	⅛
6144	East Caradon (cop.)	2	1¾
2048	Ea. Falmouth (lead)	2	3⅜
5200	East Fowey Consols	¼	1⅛
5500	East Frongoch (ld.)	13s. 6d.	⅛
4096	East Gonamena	1s. 3d.	⅛
6000	Ea. Trelawny (sil.-ld.)	⅛	¾
512	Forest, Illogan	6	5
24000	Glenaulin & Carivilleen	⅛	⅛
4096	Great Caradon	3s.	¼
512	Great Rough Tor	37	4
24000	Gt. Sortridge United	6s.	3s.
10000	Great Tregune East	¼	⅜
10000	Great Wh. Martha	¾	⅛
17090	Kilraine, Donegal	3s.	⅜
20	Hill of Towy	nil	60
320	Nent Force, Alston	1	1⅛
3072	Newton St. Cyres	1	—
256	North Fowey (cop.)	4¾	¼
6400	North Hingston Con.	2s. 3d.	—
4800	N. Wh. Ludcott, St. Cl.	3d.	⅛
6000	N. Wrey and Julia	6s.	⅜
5000	Pendeen Consols	1¼	⅜
6000	Perran (silver-lead)	⅜	⅜
1024	Polwhele, Truro	6d.	1
6000	Severn (lead, cop.)	£1 1	1⅛
21000	South Devon Consols	1	
6000	S. Dolcoath & Carn. C.	¾	
2000	South Gorland	5	
6000	So. Rob. and Sortridge	¼	
2560	South Rosewarne	⅛	
3072	Sou.-West Phœnix	£1 13 6	
12000	South Wheal Robert	3s.	
6000	South Wheal Wrey	1s. 6d.	
4000	South Zion	1s. 6d.	
1800	Teign Hope, Dartm.	1	
4000	Tresellyn Consols	14s. 6d.	
256	West Sharp Tor	62	
512	Wh. Clinton (lead)	6	
512	Wheal Freedom	1	
4000	Wheal Glynn	9s. 6d.	
1024	Wheal Penair	6s. 6d.	
3900	Wheal Pollard	13s. 8d.	
1000	Wh. Regent (Limit.)	2¼	
4000	Wheal Treeby	⅜	

Transactions on the Stock Exchange.

MINES.

Shares.		Paid.	Clos. Pr.	Bus. Done.
100000	Anglo-Californian	⅛	—	—
20000	Australian	7	1 1¼	1 1⅛
80000	Clarendon Consols	⅛	⅜ ⅜	—
100000	Colonial Gold	1	—	—
350000	Copper Miners of England Stock		30 35	—
12000	Ditto, Pref., 7½ per cent.	25	26 28	—
25000	Fortuna	1¼	1⅛ 1¼	1¼ 1⅜
100000	Great Nugget Vein	1	⅛ ½	⅜
51886	Grand Duchy of Baden	1	—	—
60000	Liberty	1	—	—
103815	Mariquita	1	⅛ ⅜	⅜
9000	National Brazilian	30	3¾ 4	3⅜
60000	New Granada	1	⅛ ⅛	⅜
200000	Nouveau Monde	1	⅜ ¼	—
100000	Port Phillip	1	⅜ ¼	—
60000	Quartz Rock	1	—	—
50000	South Australian	1	¼ ⅜	—
70000	Waller	1	—	—
100000	West Mariposa	1	⅛ ¼	—

JOINT-STOCK BANKS.

Shares.		Paid.	Clos. Pr.	Bus. Done.
22500	Australasia	40	104 105	104½
20000	British North American	50	—	—
40000	Chartered Bank of Asia	5	5½ 6	—
3000	City	50	71 73	72¼ 73
20000	Colonial	25	—	—
25000	Commercial of London	20	—	—
25000	Eng., Scot., and Aust. Chart.	20	16¾ 17¼ xd.	16¾ 17
32200	India, Australia, and China	4	—	—
6000	London	50	68 70	69¼
25000	Lond. Chart. Bank of Austr.	20	21 22	22¼ 22
20000	London and County	20	—	35½
5000	London and Eastern	50	51 53	—
6000	London and Paris	30	20 25	—
60000	London Joint-Stock	10	—	32¼
50000	London and Westminster	20	—	49½
10000	National Provincial of Eng.	10	—	23
20000	New South Wales	20	47 49	—
33673	Oriental Bank Corporation	25	39½ 40½	40¼
20000	Provincial of Ireland	25	—	56
3000	Royal British	50	—	—
12000	South Australia	37½	36 38	—
32000	Union of Australia	25	68 70	69 69
60000	Union of London	10	—	27¾

MISCELLANEOUS.

Shares.		Paid.	Clos. Pr.	Bus. Done.
200000	Crystal Palace	5	2 2⅛	2 2⅛
30000	Ditto (Preference)	5	5½ 5¼	5⅛ 5
60000	Eastern Steam	15⅛	—	—
700000	Electric Telegraph	100	93¾ 95½	96
70000	English and Australian Cop.	5	1⅛ 1⅜	1⅛
50000	General Screw Steam	18	13 13⅛	13⅜
200000	London General Omnibus	4	3¾ 4⅛	4
10000	Magdalena Steam	10	—	—
30000	Mediterranean Elect. Teleg.	10	8 10	—
50000	National Patent Steam Fuel	1	—	—
25000	North of Europe Steam	15	13¼ 13¾	13¼ 13
50000	Oriental Gas	1	1⅛ 1¼	1⅛
120000	Peel River Land and Mining	5	2½ 2¾	—
30000	Penin. and Oriental Steam	50	65 67	66 66
14840	Royal Mail Steam	60	72 74	71¾ 7
14200	South Australian Land	25	35½ 36½	36¼
100000	Scottish Australian Invest.	1	1⅛ 1¾	1⅛ 1

, Our object being to make the Share List correct, we earnestly call upon all who have the power, to aid us, by forwarding any alterations or correction which may, from time to time, come under their notice. Reports from mines—in fact, mining information of every description, forwarded to our office, will meet ready attention.

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